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ABSTRACT

The first three units of this twelve unit combination workbook and instruction manual which is designed for non-professional library personnel presents an introduction to basic reference works and with bibliographic tools. The first unit which introduces reference tools, discusses what reference work includes and the how to use such reference tools as: directories, dictionaries, encyclopedias and handbooks, bibliographic tools, and catalogs, and indexing and abstracting services. Each of these tools is more fully discussed in the subsequent units of this instructional manual. The two units on bibliographic tools gives instructions on the use of three reference books to answer questions that arise when it is necessary to go outside the library to fill a request for a serial. The three are: "Ulrich's International Periodicals Directory," "Union List of Serials," and "New Serial Titles." "Union List Excerpts" to be used with the bibliographic tools units is also included. (Other Units are: LI004052 through 004055. This instructional package is discussed in ED032085.) (Author/NH)

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REFERENCE TOOLS AND SERVICES:

Introduction to Reference Works

and

Bibliographic Tools--Serials

On-The-Job Training of Library Personnel

U.S. Office of Education
OEC-1-7-071214-5116
with support from the U.S. Army ATLIS Project

System Development Corporation
2500 Colorado Ave.
Santa Monica, California 90406

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REFERENCE TOOLS and SERVICES

Introduction to Reference Works

On-The-Job Training of Library Personnel

Produced under contract with the U.S. Office of Education OEC-1-7-071214-5116, with support from the U.S. Army ATLIS Project.

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PREFACE

This "Introduction to Reference Works" is one of twelve units designed to increase your knowledge of reference techniques and reference tools. The other units in the series are:

- Bibliographic Tools-Serials (2 units, bound together)
- General Technical Encyclopedias
- Engineering Handbooks
- Commercial Directories
- Organizational Directories
- Biographical Directories
- Serials Indexing and Abstracting Services (3 units)
- Reports Indexing and Abstracting Services

Each of these units is a combination workbook and instruction manual. Sometimes you will be asked to answer questions or to practice using certain reference books. You will have no trouble following the directions given in each unit. And when you take a quiz, the answers will always be given. As you complete each unit of instruction, you keep the unit for your own use. By the time you finish all the units about reference tools and services you will have a set of materials which should be of help to you in your work. Save these materials and add to them as you collect more information about reference work.

When you have completed this introductory unit, you may work on the remaining units in any order you choose. Be sure that you will be able to set aside a reasonable amount of time--30-45 minutes--before you select another unit to study.

REFERENCE TOOLS
UNIT 1

Even people who visit your library frequently may be unable to make maximum use of the card catalog, or to locate and use abstracts, indexes, bibliographies, and other reference tools. Therefore, it is important for members of the library staff in general--and the reference staff in particular--to have the skill and knowledge to help users locate materials in the library. This unit will introduce you to general reference techniques. The units that follow this one will introduce you to specific reference tools. Some of these units will help you relate user requests to what is available in the library and will broaden the range of tasks you can do in your library.

This first unit is an introduction to reference sources and to understanding some of the ways in which users ask questions. Before you begin the unit, you may want to check your knowledge of reference techniques and reference tools. Take the quiz which begins below and try not to spend more than five minutes on it. Skip the questions that you can't answer quickly--the correct answers are given at the end of the quiz.

QUIZ

1. Most users who come to your library looking for specific books or specific journal articles will have no trouble finding them in the library.

   True _____
   False _____

2. The library staff should be able to help a user locate major libraries in the United States that own a complete set of a journal or magazine.

   True _____
   False _____

3. If you understand a user's question but are unable to answer it, your choice of what to do next might include:

   A. Recommending a departmental library at a local university which has a very specialized science and technology collection.

   B. Suggesting that the user talk with Dr. _____ in your own organization, since he is doing research on the subject in question.

   C. Introducing the user to the head librarian or senior reference librarian in your library, who can provide additional help or suggestions.

   D. All of these.

4. The most frequently used source of general information about scientific and technical periodicals is:

   _____A. Ulrich's International Periodicals Directory

   _____B. Ayer's Directory of Newspapers and Periodicals

   _____C. New York Times Index

   _____D. New Serial Titles

5. The Directory of Special Libraries and Information Centers is a guide to collections and personnel in U. S. and Canadian special libraries and information centers, and to major special collections in university and public libraries.

   True _____
   False _____

6. Handbooks contain tables of numerical data, graphs, and statistical information, but seldom contain substantial amounts of text and discussion.

   True _____
   False _____

7. When users frequently come to the library to ask for reference assistance, it is an indication of their confidence in the library's services and staff.

   True _____
   False _____

QUIZ ANSWERS

1. False--even if users know the authors or titles of specific items they may not know how to locate these items on your library shelves.

2. True--you will learn more about "union lists" in later units.

3. D--knowing when to make referrals is an important part of reference work.

4. A--a later unit will tell you more about Ulrich's International Periodicals Directory.

5. True

6. False--some handbooks are organized into chapters that consist mostly of text supplemented by some tables and drawings.

7. True--users who are not pleased with the library and its service seldom return.

What Reference Work is About

In technical libraries, reference work is a major activity. We said earlier that the reference staff helps users to locate and use materials in the library. What did we mean? Just this. The library is not simply a storage vault for a large collection of books. Books as well as periodicals and reports are meant to be used. If library patrons are not aware of the kinds of information that can be found in the library, if they do not know how to find it, and if they are unfamiliar with the library tools that are available to them, then the reference staff must assume the role of "middleman". The reference staff helps users to use the library more effectively.

Good library service results when users and library staff work together to solve problems. Learning to communicate with users and to understand their needs for information is a basic part of reference work.

Many detailed reference tasks are performed not only for the user public but also in support of other members of the library staff. Reference personnel also may assist the cataloging and acquisitions processes by checking bibliographic details. This same support is provided to the staff member responsible for interlibrary loans.

The Reference Request

Users appear at the reference desk to ask questions. Some questions will be easy for you to answer. Examples of such questions are:

- May I see a copy of DeVries' German-English Technical Dictionary?
- Does the library have a copy of the World Almanac?
- Where in the library can I find the McGraw-Hill Encyclopedia of Science and Technology?

Answers to these questions can be found in the card catalog--or you may know the answers from experience. Some questions will be much more difficult than these. They may be difficult because they are less specific, or because they are less familiar publications, or because the user does not express his question clearly. Examples of more difficult questions are:

- Where can I find the address of the American Institute of Physics?

- Where can I find information on electrophoresis?

- Can you tell me the dates and location of the next national meeting of the American Association for the Advancement of Science?

Do you know how to answer these questions?

If not, your first steps should be to define these questions in relation to reference sources that are available in your library. Of the reference books that you are familiar with, which is the most likely to contain the requested information? Which is the next most likely source? Think about the possible sources and mentally arrange them in the order that you intend to search.

Once you have organized your thoughts and started your reference search, do you know when to stop searching? Of course, if you find the answer that satisfies both you and the user, your search is ended. But suppose:

- You find an answer or a partial answer that does not seem quite right to you.

- You find an answer that you believe is correct, but the user is not satisfied with it.

- You can't find the answer or even any clue that might lead you to it.

- There is <u>too</u> much information available--and you don't know how much of it to pass on to the user.

These are many reasons why the difficulties listed above may occur. Some of these are:

- You are almost positive that there is a newer edition of the reference book that may contain the answer.
- Someone asked the same question last month and you remember finding a somewhat different answer.
- The user has asked too broad a question and you have given him too broad an answer.
- There is no available source that can furnish an answer.

Think of other reasons why a reference search may be unsuccessful or incomplete and write them in the space below. You should recognize that some searching problems have to do with you and with your knowledge of the library, while others have to do with the user--especially with his ability to ask the right question.

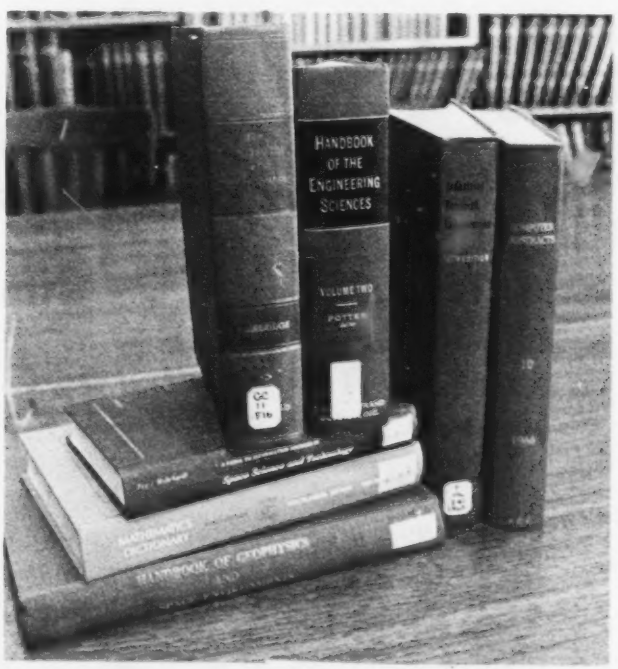
Now that we have thought about some of the reasons for an <u>unsuccessful</u> search, let's go back and rescue our user. When you have not been able to complete a search, you should refer the user to appropriate members of the reference staff who are available. Be sure to tell the reference librarian what the question is and where you have already looked in trying to answer it. Many libraries have a standard "reference inquiry form" so that all staff members can jot down questions as they occur and then briefly

record the progress of the search. This method is especially helpful when several questions come in at the same time and when more than one staff member might be asked to work on the same search problem.

Using Reference Tools

When librarians talk about basic reference tools, they usually group these tools into categories, each of which has a characteristic subject matter, vocabulary, and physical arrangement.

- Directories
- Dictionaries
- Encyclopedias and Handbooks
- Bibliographic tools and catalogs
- Indexing and Abstracting Services



As you might expect, not every reference book fits neatly into a category. Likewise, not every book with "directory" in its title will have all of the characteristics that we tend to associate with the broad category "directories".

Since it is easy to remember the general characteristics of one category of reference tools but difficult to remember the individual characteristics of each book that falls into that category, let's look at the general characteristics of each of the five categories we mentioned above.

DIRECTORIES

Directories provide a variety of information on people, places, products, organizations, etc. Directories may provide the following kinds of information:

- names of businesses
- names of officers and members
- addresses
- publications
- products or services
- sales and profits

The most familiar directories are those published by telephone companies. In a telephone directory, the white pages are in alphabetical order and the yellow pages are arranged by subject. In arrangement and use, a telephone directory is a typical reference book.

Most large organizations and many small ones publish membership directories. These membership lists serve as an informal who's who for various subject fields.

Organization directories are available for international organizations, professional and trade associations, educational and cultural institutions, social and fraternal organizations, and political groups.

A large number of specialized directories are published by commercial publishers. For example, if you know the name of a company that specializes in laser technology, you could find its address and telephone number in the "Electronic Industry Telephone Directory". This volume is revised and published annually by Electronic Periodicals Inc. (see pp. 11, 12 and 13 which are reproduced from the section "Electronics" in Klein's "Guide to American Directories".)

When using directories, you should remember that directory-type information is often out of date. For this reason, directories are often published annually or bi-annually. Be sure that you use the latest edition available--if this is appropriate. If someone wished to know the address of a company that was in business from 1960-1964, then it would be important for you to locate and use a directory that was published during those years.

The latest information is not always the correct information. Be sure to pay attention to the question.

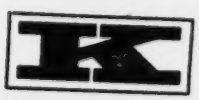
Which of the questions on pages 5 and 6 could be answered with a directory?

GUIDE TO AMERICAN DIRECTORIES

Seventh Edition

A GUIDE TO THE MAJOR BUSINESS DIRECTORIES OF THE UNITED STATES *Covering all Industrial, Professional, and Mercantile Categories*

BERNARD KLEIN
Editor



B. KLEIN AND COMPANY New York, N. Y. 10011

ELECTRONIC INDUSTRIES YEARBOOK

Directory contains an analysis of industry growth and trends in sales of consumer, industrial, and government products (defense and space use). Tables and charts on television sets, radios, hi-fi phonographs and components, and for various types of equipment. Data on employment, distribution of plants by state and region, funds for basic research performance, and foreign trade included. Published by Electronic Industries Association, 1721 DeSales St., N.W., Washington, D.C. 20036.

ELECTRONIC INDUSTRY TELEPHONE DIRECTORY

From a total of 70,000 entries, publication lists over 20,000 electronic firms in alphabetical sequence, with firm name and address, with city, state, and long distance dialing phone number. Also lists over 50,000 firms under 600 main product headings and approximately 2,500 sub headings. 280 pp. Revised and published annually by Electronic Periodicals, Inc., 33140 Aurora Rd., Cleveland, Ohio. 44139. $6.00 per copy.

ELECTRONIC NEWS FINANCIAL FACT BOOK & DIRECTORY

Names of officers of parent company and subsidiaries (including board of directors): ratios on pre-tax profits to sales, net profit to sales, net profit to net worth; name and address of organization headquarters; name and address of subsidiaries and divisions; product classifications; plant footage; number of employees; latest figures on capital, surplus income before taxes, earnings; income statement -- current and previous year; comparison of net sales and profits, for at least five years; dividend data for last five years; number of shares of stock outstanding, for at least five years; earnings per share, for at least five years; assets and liabilities, current and previous year; stock splits in detail; special feature section on major industry development, government and consumer spending patterns. 377 pp. Revised and published annually by Fairchild Publications, Inc., Book Divison, 7 E. 12th St., New York, N. Y. 10003. $35.00 per copy.

ELECTRONIC SOURCE PROCUREMENT

Contains a listing of approximately 7,000 electronic component, equipment and systems manufacturers. Purchasing Index section contains over 500 product categories with several thousand sub-product classifications. Names approximately 3,500 manufacturers' representatives and branch locations, giving lines handled, personnel, special services; 3,000 electronic distributors and branches, territory served, managers' or buyers' names. Revised and published annually by Electronic Periodicals, Inc., 33140 Aurora Road, Cleveland, Ohio. 44139. $20.00 plus postage per copy.

ELECTRONIC SOURCES

Publication provides entries on approximately 15,000 national manufacturers of electronic equipment and supplies and their western representatives. Classified product and service section included. Published by Directories of Industry, Inc., 2225 Southwest Drive, Los Angeles, Calif. 90043.

ELECTRONIC TECHNICIAN'S DIRECTORY

Directory's approximately 300 entries give names and addresses of manufacturers of electronic replacement products, component parts, equipment, instruments, materials and services. Revised and published annually by Ojibway Press, Ojibway Bldg., Duluth, Minn. 55802. Distributed free of charge.

ELECTRONIC TRENDS

Consists of monthly statistical and economic narrative of trends in the electronic industries, prepared by staff economists and statisticians. Published by Electronic Industries Association, 1721 DeSales St., Washington, D.C. 20036.

ELECTRONICS BUYERS' GUIDE AND REFERENCE ISSUE

Contains entries of 5,000 manufacturers; geographic listings of manufacturers' representatives and sales offices for manufacturers; 4,100 product categories and cross-references of electronic components, equipment, materials, supplies and services in the electronics industry. Published annually in October by Electronics, McGraw-Hill, Inc., 330 W. 42nd St., New York, N.Y. 10036. Free with subscription to Electronics; $5.00 per single copy.

FLORIDA ELECTRONIC/AEROSPACE INDUSTRIES

Alpha-geographic listing of electronic/aerospace industries and manufacturers' representatives. Each listing contains information on company name, address, telephone number, date established, employment size, products and services. Published by the Research and Planning Division, Florida Development Commission, LeRoy Collins Bldg., Tallahassee, Fla. 32304. Distributed free of charge.

GREATER BOSTON'S DIRECTORY OF ELECTRONICS RESEARCH AND DEVELOPMENT, DEFENSE AND SPACE FACILITIES INCLUDING THE N.A.S.A. COMPLEX

Alphabetical and geographical listing of 400 Boston firms, giving addresses, officers, subsidiary companies, areas of activities; listings of military and government research facilities, and the National Aeronautics Space Administration complex. 250 pp. Revised and published by Greater Boston Chamber of Commerce, 125 High St., Boston, Mass. 02110. $5.00 per copy.

IMPORTS-EXPORTS BULLETIN

See "Exporting and Importing"

NUCLEONICS BUYERS' GUIDE

Contains an alphabetical list of nuclear industry manufacturers and suppliers of products, materials and services under 1,000 product categories. 336 pp. Revised and published annually in December by McGraw-Hill, Inc., 330 W. 42nd St., New York, N.Y. 10036. Single copies, $2.00 each.

RADIO AMATEUR CALLBOOK MAGAZINE

Lists approximately 280,000 licensed radio amateurs in the United States, and 133,000 radio amateurs in all countries outside of the United States. Includes: international radio amateur prefixes, radio amateur prefixes by countries, A.R.R.L. phonetic alphabet, Great Circle bearings, Great Circle charts, international "Q" and "Z" signals, world standard time charts, complete postal information, world prefix maps, F.C.C. examination points, where to buy, telegraphers' abbreviations, DX operating code, A.R.R.L. countries list, amateur radio dealers. Published every three months by Radio Amateur Callbook, Inc., 4844 W. Fullerton Ave., Chicago, Ill. 60639. $20.00 per year (four issues).

DICTIONARIES

In science and technology, special dictionaries of technical terms are created for single subjects and for groups of related subjects. For technical subjects as well as for languages, a dictionary is a book containing vocabulary terms arranged in alphabetical order with explanations and examples of their meanings and use. Often, pronunciation of the word is indicated, and, sometimes, its origin or derivation is also given. Many special dictionaries of technical terms contain separate sections of formulas, and lists of symbols and abbreviations. Page 15 is a page from the Electronics and Nucleonics Dictionary. You can see that it provides technical definitions of technical terms.

Foreign-language dictionaries have become increasingly important in technical libraries. The international aspects of science literature created a need for bilingual or polyglot dictionaries of scientific terms. Louis Devries has edited both French-English and German-English science dictionaries. These dictionaries provide the French and German equivalents of English technical terms. One or more of the multilingual technical dictionaries published by Elsevier are found in nearly every technical library.

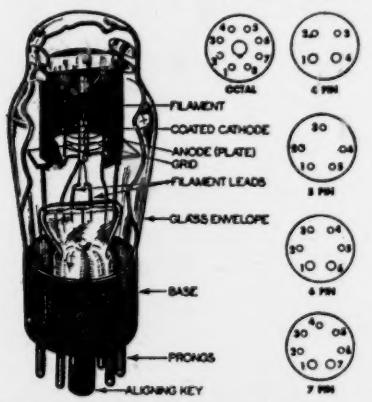
Users who come to your library to ask for a dictionary in which to find a particular term may expect you to provide a standard unabridged dictionary of the English language. Most often, this kind of dictionary will not provide a satisfactory definition. That is, the definition may be too general and not given in the scientific context which the user is seeking.

electron synchrotron A synchrotron designed to accelerate electrons. The electron beam is allowed to strike an internal target, producing high-energy gamma rays that are used outside the machine.

electron telescope A telescope in which an infrared image of a distant object is focused on the photosensitive cathode of an image converter tube. The resulting electron image is enlarged by electron lenses and made visible by a fluorescent screen. An electron telescope can be used in complete darkness. The sniperscope and snooperscope are examples of early military versions.

electron trajectory The path of one electron in an electron tube.

electron tube An electron device in which conduction of electricity is provided by electrons moving through a vacuum or gaseous medium within a gastight envelope. A tube may provide rectification, amplification, modulation, demodulation, oscillation, limiting, and a variety of other functions.



Electron-tube construction, showing typical heater-type triode with octal base, and bottom views of five different tube bases. On octal tubes, one or more base pins are sometimes omitted.

Examples include cathode-ray tubes, gas tubes, phototubes, and vacuum tubes. Also called electronic tube, radio tube, tube, and valve (British).

electron-tube amplifier An amplifier in which electron tubes provide the required increase in signal strength.

electron-tube coupler A coupler specifically designed to be inserted between an electron tube and an input or output device, as between a magnetron and a transmission line.

electron-tube generator A generator in which d-c energy is converted to r-f energy by an electron tube in an oscillator circuit.

electron-volt [abbreviated ev] A unit of energy equal to the energy acquired by an electron when it passes through a potential difference of 1 volt in a vacuum. One electron-volt is equal to 1.602×10^{-12} erg.

electron-wave tube An electron tube in which mutually interacting streams of electrons having different velocities cause a signal modulation to change progressively along the length of the electron streams.

electro-optical shutter A shutter that uses a Kerr cell to modulate a beam of light.

electro-osmosis The movement of fluids through diaphragms as a result of the application of an electric current.

electrophonic effect The sensation of hearing produced when an alternating current of suitable frequency and magnitude is passed through a person.

electrophoresis The movement of charged particles suspended in a fluid medium, under the influence of an electric field. Also called cataphoresis.

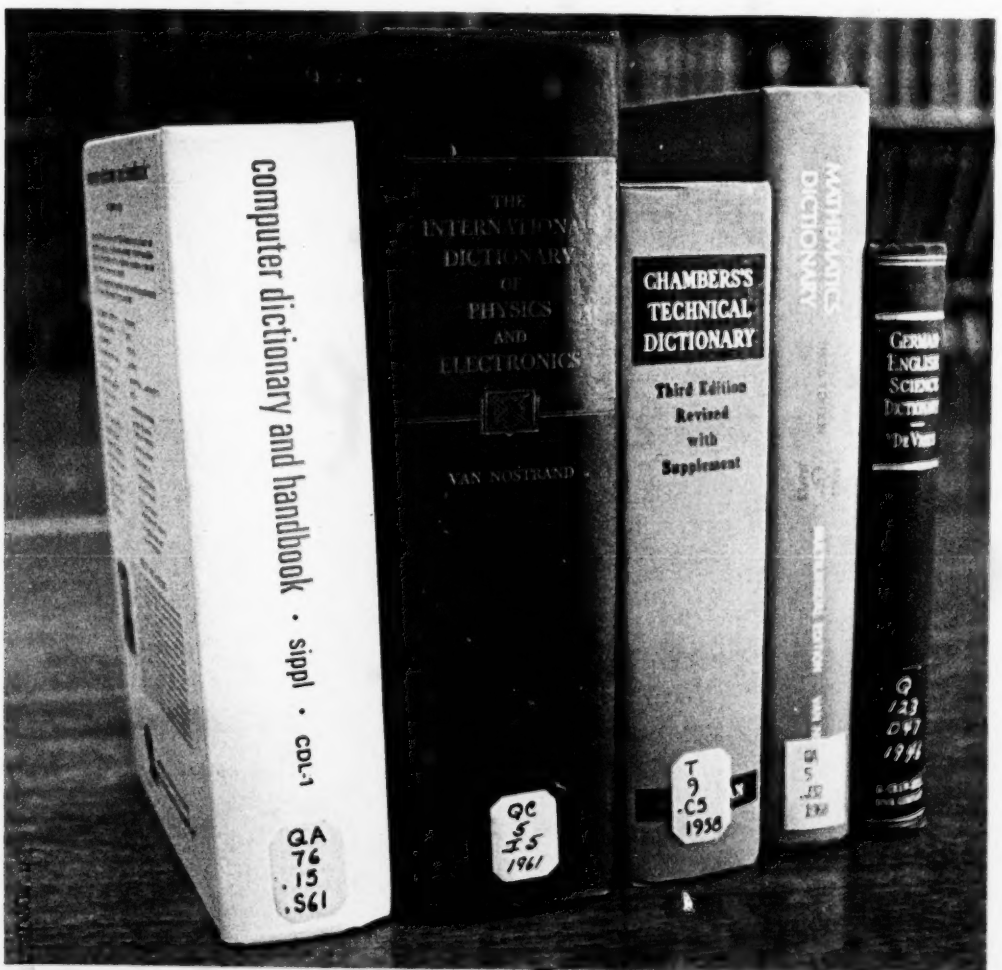
electrophorus A device used to produce electric charges by induction, consisting of a metal plate and a disk of resinous insulating material. In operation, the insulating disk is negatively charged by rubbing with fur. The metal plate, held by an insulating handle, is placed on the disk so it is charged by induction (bottom surface positive and top surface negative). The top surface is touched with a finger to remove the negative charge. When lifted off, the plate now has a strong positive charge all over.

electrophotography Original name for xerography, as invented by Chester F. Carlson in 1937. Electrophotography now includes both xerography and xeroradiography.

electrophrenic respiration Artificial respiration in which the nerves that control breathing are stimulated electrically through appropriately placed electrodes. The equipment needed is commercially available in portable form and is used by many rescue squads in preference to manual methods of artificial respiration.

electroplating The electrodeposition of an adherent metal coating on a conductive object for protection, decoration, or other purposes. The object to be plated is placed in an electrolyte and connected to one

Before you can select a specialized science dictionary for this user, you must be able to recognize the subject field to which the term in question belongs. You can sometimes identify the subject by knowing the subject interest of the user--or the department where he works. If you tell the user about the special subject dictionaries in the library, he will very likely volunteer the information that you need to make the appropriate selection.


computer dictionary and handbook · sippl · CDL-1
QA 76 .15 .S61
THE INTERNATIONAL DICTIONARY OF PHYSICS AND ELECTRONICS
VAN NOSTRAND
QC 5 I5 1961
CHAMBERS'S TECHNICAL DICTIONARY
Third Edition Revised with Supplement
T 9 .C5 1958
MATHEMATICS DICTIONARY
Q 123 D47 1944

ENCYCLOPEDIAS & HANDBOOKS

Most science and technology libraries keep one comprehensive, adult encyclopedia in their reference collection. Although a Britannica or Americana is obviously not intended exclusively as a source of science information, it does contain informative articles on subjects in every field of knowledge. These encyclopedias are often used as a source of basic background information--either by a scientist whose research brings him to the fringes of a new subject area or by a librarian who wishes to do some general reading before beginning an intensive bibliographic search on a research topic. At least one multi-volume general encyclopedia devoted to science subjects is now available. This is the McGraw Hill Encyclopedia of Science and Technology. It will be discussed in a later unit.

Handbooks may be thought of as more specialized encyclopedias, and are usually of the one-volume or two-volume variety. Handbooks may contain mostly facts and figures, mostly specialized or state-of-the-art articles, or a combination of both. Handbooks are arranged topically according to the ways in which specialists tend to think of the subject matter.

Examine the table of contents pages from Volume I (The Basic Sciences) of the Handbook of the Engineering Sciences. These pages are 18 to 24. Notice that you cannot really tell what the handbook contains from its title. Notice also that the book has an index and that each section includes bibliographical references. Many technical libraries find that a comprehensive collection of up-to-date handbooks supplies answers to a majority of reference questions.

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Potter, James H. Handbook of the Engineering Sciences. Van Nostrand, 1967. 2 vol. Vol. 1: The basic sciences.

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2. PHYSICS

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Although all handbooks have certain common characteristics, we must remember that a person unfamiliar with the details of a specialized subject field should be prepared to spend some time learning to use each handbook. The ability, to pick up a new handbook and to quickly feel at home with it is a function of experience and practice. The purpose of these lessons on reference tools is to improve your ability to find what you need to know about a strange book, quickly and intelligently.

BIBLIOGRAPHIC TOOLS AND CATALOGS

Bibliographies are used in many ways. In an acquisitions department they are used to find information about publishers, editions, and prices. Catalogers use bibliographies to verify information--author, titles, etc. In reference work, bibliographic information sometimes is not available or known. Bibliographies may also be used in the reference department as aids to selection, expecially when a user has asked for advice or recommendations. Although a great many people think of bibliographies as descriptive lists of books, bibliography actually has to do with records of many different types. Among the most important bibliographic tools which you will encounter are union lists, union catalogs, and indexes to serials.

Serials indexes include such familiar tools as Engineering Index and Applied Science and Technology Index. Since there are some 50,000 current serial titles in science and technology issued throughout the world, you can see that no individual library could possibly subscribe to every title. Access to this serials literature is provided by the indexing services.

A union list is a catalog of the periodicals received by libraries in a specific country or region with an indication of the libraries which own any given title. When you must go outside your own library to fill a request for a serial, you will be using such bibliographic tools as Ulrich's International Periodicals Directory, Union List of Serials in Libraries of the United States and Canada, and New Serial Titles.

INDEXING AND ABSTRACTING SERVICES

Although there are most than 400 English-language indexing and abstracting services currently published, no library is likely to purchase more than a small fraction of these. Technical libraries in particular depend on indexing and abstracting services to provide access to both the serial and report literature. Periodicals and reports are important to the technical library because they contain relatively current information that is not yet available in books. Indexes may be arranged alphabetically, as by subject, author, or title; numerically, as by report number or contract number; or according to a classification scheme such as the Dewey Decimal System or the Universal Decimal Classification (UDC).

Abstracting journals may be considered to be current, subject bibliographies with informative or descriptive annotations or summaries of journal articles, bulletins, patents, or other publications. That is, an abstract consists of bibliographic information (author, title, publisher, etc.) and a summary of the research that was reported in the abstracted article or book. Chemical Abstracts, Metals Abstracts, and Physics Abstracts are examples of technical abstracting services. Most abstracting journals have detailed annual indexes; many have 5-year or 10-year cumulated indexes, which are used in retrospective searching.

Each indexing and abstracting service is likely to be different in arrangement, coverage, and frequency of publication. Each is different in the "up-to-dateness" of the materials it includes. Experience in using the tools available in your library will help you select the most appropriate information source to use in responding to a reference request.

Learning About Reference Books

As you read through all the units in the reference package you will become familiar with several well known and widely used reference works. But this instruction covers only a few of the many hundreds of technical reference works that are essential to reference librarians. There is no simple or quick way to learn about all of them. It takes time to learn--experience and practice are the best teachers. You must examine unfamiliar reference books, one at a time. Hurrying will not help--slowly getting to feel comfortable with a new book is the best approach.

To review what you have already learned, let's reconsider the questions on pages 5 and 6 (some of which are repeated on the next page). Complete the suggested assignments. Suggested answers where appropriate, will be found on page 30.

EXERCISE 1

WHERE CAN I FIND THE ADDRESS OF THE AMERICAN INSTITUTE OF PHYSICS?

A. Which category of reference tools is the most likely place to find this address? _____

B. Can you think of one or more reference books which might contain the address of the American Institute of Physics?

_____

_____

_____

C. Examine the card catalog and the reference collection in your library to determine which reference tools are sources of information about professional organizations.

EXERCISE 2

WHERE CAN I FIND INFORMATION ON ELECTROPHORESIS?

A. This exercise will give you the opportunity to examine general and specialized dictionaries and encyclopedias. Look up the word "electrophoresis" in an unabridged dictionary. Is the information sufficient to suggest the next logical step in the search? _____

B. See if you can find an article relating to the word "electrophoresis" in a general encyclopedia. Then look up electrophoresis in the McGraw-Hill Encyclopedia of Science and Technology. Which encyclopedia is most suitable? Notice the publication dates of the encyclopedias you

examined. If there is a big difference in the publication dates of the encyclopedias, might this influence your decision as to where to begin a reference search?

EXERCISE 3

CAN YOU TELL ME THE DATES AND LOCATION OF THE NEXT NATIONAL MEETING OF THE AMERICAN ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE?

A. Which periodical is published by the American Association for the Advancement of Science? _____

B. Does this periodical give information about national meetings of the Association?

C. What other sources of information about professional meetings do you find in your library? _____

_____

D. Examine as many of the following as possible. Which publications contain information about national or local meetings of professional organizations?

____Scientific Information Notes

____Scientific Meetings

____Scientific and Technical Societies of the United States

EXERCISE 4

EXAMINE THE PREFACE TAKEN FROM THE HANDBOOK OF THE ENGINEERING SCIENCES AND THE TITLE PAGE AND PREFACE FROM THE ELECTRONICS AND NUCLEONICS DICTIONARY. These pages appear as 31 to 35.

Do you get some feeling about the usefulness of the books and the purposes which their editors had in mind? Examine these books if they are in your library. Do your impressions of the books change now that you have seen actual copies?

ANSWERS

EXERCISE 1

A. directories

B. .Encyclopedia of Associations
.Directory of Special Libraries and Information Centers
.Library of Congress. National Referral Center. A directory of information resources in the United States. Physical and Biological Sciences

EXERCISE 2

A. Science

PREFACE

The range of modern engineering activity and the complexity of the problems to be solved in the scientific world today have inevitably and beneficially affected modern engineering education. Consistently evident during the past 25 years has been the simultaneously analytical and interdisciplinary approach that is necessary to produce engineers capable of confronting the most esoteric and complex of problems. Consequently, current engineering curricula present not only the tested and pr[illegible] basic disciplines of mechanics, thermodynamics, materials, and applied electricity, but reflect also the broad scope and intricate maturity currently enjoyed by mathematics, chemistry, and physics. From these has arisen that group of courses generally identified as the *Engineering Sciences*.

The HANDBOOK OF THE ENGINEERING SCIENCES recognizes and utilizes the impact of scientific exploration upon engineering development. Volume 1, *The Basic Sciences*, presents seven major sections—mathematics, physics, chemistry, graphics, statistics, theory of experiments, and mechanics—as background for the applied engineering sciences. Volume II, *The Applied Sciences*, has eighteen major sections—thermal phenomena, heat and mass transfer, chemical energy conversion, turbomachinery, nuclear reactor engineering, aeronautics and astronautics, field theory, electromechanical energy conversion, physical electronics, electronic circuits, system dynamics, materials science, machine elements, control systems, operations research, information retrieval, preparation of reports, computers—written to satisfy the engineer's practical needs for thorough explanations, calculations, and examples.

The guiding philosophy in the preparation of this volume has been to assemble, categorize, and digest the more or less enduring fundamental considerations of the principal engineering sciences on a level approximating that of the first-year graduate student in engineering. Both volumes have been prepared by experts in the various fields, and have been reviewed critically to maintain a uniform clarity and applicability. Although useful in itself, material generally designated "hardware"—tables of the sizes and weights of machine parts, standards for the testing of power machinery, and similar data—has been excluded in order to better accommodate the presentation of more basic facts, techniques, and methodology.

In approaching these volumes, the busy reader can be assured that diligent effort has been made to foresee his needs. Superfluous material has been omitted, abridged, and excised in order to keep the work as compact as possible, and each subject has been approached with a recognition of the need for conciseness and precision.

JAMES H. POTTER

January, 1967

Potter, James H. Handbook of the Engineering Sciences. Van Nostrand, 1967. 2 vol.

ELECTRONICS AND NUCLEONICS DICTIONARY

Accurate, easy-to-understand, and up-to-date definitions for 16,338 terms used in television, radio, medical electronics, industrial electronics, space electronics, military electronics, avionics, radar, nuclear science, and nuclear engineering

JOHN MARKUS

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EDITORIAL BOARD, AMERICAN DOCUMENTATION INSTITUTE
EDITORIAL BOARD, ANNUAL REVIEW OF INFORMATION SCIENCE AND TECHNOLOGY

Third Edition

McGRAW-HILL BOOK COMPANY

New York San Francisco Toronto London Sydney

PREFACE

Concise, accurately updated definitions of 16,338 electronic and nucleonic terms, made even clearer by 993 carefully chosen illustrations, are presented here for everyday use by engineers, technical writers, advertising copy writers, technicians, students, and secretaries working in these fields. Synonyms are identified and cross-referenced to the term that has become generic through common usage or through standardization by IEEE, ASA, and other engineering organizations.

This book is the third edition of *Electronics Dictionary* which was launched in 1942 with the late Nelson M. Cooke, and updated in 1960. Very few of the 6,400 definitions in the first edition are in their original form. As the electronics industry has matured and expanded in the past 25 years, familiar old terms have taken on new meanings. The rate of increase in completely new terms has been going up, from an average of 375 per year for the 13,250-term second edition to over 500 per year for the third edition. Some of the more striking new terms in this edition include adatom, antennafier, antivox, astrometer, bidops, binistor, carbometer, cryosar, ebicon, fluorod, hologram, ionogram, ixion, ladar, lofar, monofier, multivator, nudome, oscillistor, persistor, piggyback twistor, quadraflop, quark, quasar, raser, ryotron, scotoscope, selenodesy, transolver, wads, and yig filter.

A consistent policy has been followed throughout on spelling and hyphenation of controversial words, compound terms, and abbreviations, to reflect current usage and logical future trends. This dictionary can therefore be adopted as a style manual with the assurance that it embodies the forms and rules used by the majority of writers and publishers in these fields today. When used in this manner on the desk of each writer, editor, and stenographer, the book pays for itself over and over again in time saved through elimination of style arguments and reduction of editing and resetting costs. As a result of this attention to style, the various editions of this dictionary have been used as style guides by *Electronics* magazine and by many government, military, and commercial organizations.

This author personally agrees strongly with a recent magazine headline "Nertz to Hertz," opposing the recent honor-thy-ancestors trend in connection

with units of measure. It is recognized, however, that many organizations have dutifully changed over to the Hertz family of frequency units, for policy reasons or by preference. Accordingly, all of the new names for electronic units are given, along with their abbreviations and equivalents. But this is all—in the definitions you will still find old familiar abbreviations such as cps and Mc.

A compound term starts out as two words, takes on a hyphen next, then becomes one word, as in push button, push-button, and pushbutton. Usage governs the transition from one form to the other. Much time was devoted to determination of the form that best represents current usage for each such term. Reference works used include the latest unabridged dictionaries, Government Printing Office *Style Manual*, and McGraw-Hill Book Company style guides, but maximum weight was given to the word forms used in the trade and professional journals.

Acronyms such as conelrad, loran, sarah, and radar have been made entirely lower-case for consistency, as also have practically all abbreviations. One major policy change in the third edition is the use of a capital letter M for mega in abbreviations, to avoid confusion with the small letter m that represents milli.

For compound terms like direct current, the same abbreviation is used for both noun and adjective forms. Of course, any lower-case acronyms and abbreviations can be made all caps if desired.

Project names and trademark names are capitalized. For trademarks this is particularly important, to avoid unpleasant correspondence with lawyers representing the owner of the trademark.

A definition is given only once to keep down the size of the dictionary. Synonyms are listed in their own alphabetical order, each followed by the generic or more common term (in italics) under which the complete definition is given.

All terms are alphabetized letter by letter, ignoring spaces and hyphens, to give a consistent sequence in which a desired word is always where you expect it to be. Terms starting with a Greek letter are alphabetized as if the letter were spelled out.

An accurate compilation of the language of electronics and nucleonics would be impossible without the help of a great many individuals and organizations. The collections of definitions prepared by government organizations and by engineering societies such as the Institute of Electrical and Electronics Engineers (IEEE), American Standards Association (ASA), British Standards Institution (BSI), International Electrotechnical Commission (IEC), and National Association of Broadcasters (NAB) proved invaluable as references, even though the rigorous formal definitions in the standard glossaries were usually rephrased and simplified for easier understanding by nonspecialists.

Particular thanks are extended to the Institute of Electrical and Electronics Engineers (IEEE) for permission to use illustrations, definitions, and condensations of definitions, to National Radio Institute for lending original drawings for illustrations, to Berkeley Enterprises for permission to use some of the definitions from *Glossary of Terms in the Field of Computers and Automation*, and to The American Society of Mechanical Engineers (ASME) for permission to

extract and condense selected terms from their publication, *A Glossary of Terms in Nuclear Science and Technology*. Credit for illustrations also goes to Aerovox Corporation, Allied Radio Corporation, Bell Telephone Laboratories, Central Scientific Company, General Electric Company, NBS, Philco Corporation, *RCA Review*, United States Navy, Westinghouse Electric Corporation, and Weston Instruments; to *Electronics*, *Nucleonics*, and other McGraw-Hill publications; and to the authors of many McGraw-Hill books from which illustrations were taken.

Finally, to Marjorie Appert goes appreciation for careful retyping, editing, and cross-checking of definitions for both the second and third editions. To Jack Quint goes full credit for accurately making up repro pages by merging the new terms, definitions, and illustrations with those of the second edition, and catching many of this author's mistakes in the process.

A dictionary is a growing thing, never quite complete and never perfect, no matter how much time is spent in its compilation. The true function of a dictionary is to portray the language of today in the field being served, with guidelines to preferred style when two or more spellings or meanings are in current use, and with precognitive anticipation for the changes of tomorrow. The author would therefore appreciate receiving corrections and suggestions for changes or new terms, addressed in care of McGraw-Hill Book Company.

John Markus

This unit was designed as an introduction to some of the techniques and information sources that reference librarians use in their work.

In the units to follow, you will have the opportunity to examine and to work with several examples of frequently used technical reference books. The purpose of all the units is to increase your knowledge so that you may continue to learn and to enjoy the challenges of the library environment.

You are now ready to take the other units of instruction. These include instruction in the following areas: Bibliographic Tools-Serials (2 units bound together), General Technical Encyclopedias, Engineering Handbooks, Commercial Directories, Organization Directories, Biographical Directories, Serials Indexing and Abstracting Services (3 units bound together), and Reports Indexing and Abstracting Services.

These units can be taken in any order that is convenient--but do not begin a new unit until you have enough time to complete it.

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LI

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SDC

BIBLIOGRAPHIC TOOLS - SERIALS UNIT 1

INTRODUCTION

There is perhaps no library resource more vitally important to scientific and technical workers than the literature published in serials, journals and other publications that are issued in a series of successive issues or numbers. You have probably already seen and handled many of the journals that are issued weekly, monthly, quarterly, or even less frequently, by professional societies. Some of these have appeared continuously over a long period of time. For example, the American Physical Society has published Physical Review since 1893; in England the Royal Society of London has published various journals since 1665. Other familiar examples are the American Mathematical Society Bulletin (since 1894) and the Annals of the New York Academy of Sciences (since 1877).

Serials such as these are often called periodicals because they appear at regular periods, or intervals, of time. Newspapers and popular magazines are also in this category, but usually they are not important sources of information for scientific, technical, or industrial work. Some serial publications do not appear at regular intervals--reports such as those on pesticides or soil conditioning that are issued, from time to time, by an agricultural extension service or the series of mathematical tables produced and published by the U.S. Bureau of Standards and known as the "Applied Mathematics Series" are examples of this type of serial publication. In any case, for the purpose of this unit, it is not important to distinguish between periodicals and other serial forms.

No single technical library, no matter how large, can expect to meet the demand for various journals and technical reports with the supply of serials on its own shelves alone. There are far too many journals, and other forms of technical literature, being published today throughout the world for any library to be able to stock all of them, and there are more scientists and other technical researchers working today than ever lived up to 1900. Therefore, both the production of technical information, and the demand for it, are now at unprecedentedly high levels. In this unit of instruction (and the next one) you will learn how to use three reference books to answer questions that arise when you need to go outside your own library to fill a request for a serial. The three are:

- Ulrich's International Periodicals Directory
- Union List of Serials
- New Serial Titles

In these useful books you can often (but not always) find the answers to such questions as:

- Is there a library in the U.S. or Canada that is able to supply a copy of a requested journal that is not available in your library?
- What is the price and publisher of a journal that your library wishes to add to its collection?
- Do you have the correct title for a journal you want to borrow from a remote library?

. Where is the journal Science indexed?

These tools are a small sample of the published reference works that are designed to answer questions about the cost, identification, existence, and sources of serial publications. Although 30 or 40 minutes of instruction in Units 1 and 2 will not make you an expert in using them, you will be well on your way to becoming a skilled user of them. Most important, you will also learn how to continue to increase your knowledge and improve your skill.

You have a vital job in the library. When you perform it well you may make a contribution to a piece of research, or to the development of a new apparatus, in much the same way as the scientist or engineer himself. The knowledge is put on printed pages so that readers can use it but the readers must first have access to the pages. The history of science and technology has revealed many instances of wasteful duplication of work. In the 1920's, for example, a Russian mathematician named Tchuprow published an important paper on the theory of statistical sampling in a European journal called Metron. (Many of his ideas are used today in computerized forecasts of election results.) Some 15 years later, in the Journal of the American Statistical Association, a distinguished University of California professor published a paper describing the same sampling concepts that Tchuprow had reported in Metron. This professor, and his many American readers, remained unaware of Tchuprow's earlier work until the late 1940's, when a student came upon it quite by accident while browsing through Metron in the stacks of a midwestern university.

History reveals other cases in which important scientific information was published but did not come to the attention of researchers

until long after its publication. In 1866, an Augustinian monk named Gregor Mendel published a paper that (ultimately) opened the way to the modern study of genetics. More than 30 years went by before Mendel's paper on the patterns of biological inheritance (these patterns are now called Mendelian Laws) came to the attention of European scientists--30 years during which great progress could have been made, if Mendel's work had been known.

To be sure, there are many reasons for such tragic waste of human knowledge, and many of them have little to do with how well you do your job. But the better you are at your job, the less likely it will be that the researchers your library serves will fail to have access to the published information they require in their work.

Let's see how much you may already know about the serials area. The quiz that follows will take about five minutes of your time. If you can't answer any question readily, skip it--you will know the answers to all of these questions, and more, by the time you finish these two units. Turn the page, and GOOD LUCK.

QUIZ

(You need only supply the letter that designates your answer; for some questions more than one letter is required to designate a correct answer.)

1. Ulrich's International Periodicals Directory lists publications of the _____.
   (A) United States only
   (B) United States and Canada
   (C) whole world

2. New Serial Titles lists periodicals which began publication after _____.
   (A) 1940
   (B) 1950
   (C) 1960

3. The entries in Ulrich's International Periodicals Directory are arranged _____.
   (A) alphabetically by title
   (B) by subject classification
   (C) by date of publication

4. Union List of Serials bibliographical entries include _____ and _____.
   (A) beginning date of publication
   (B) cost
   (C) place of publication

5. The frequency of publication for a serial can be found in _____.
   (A) New Serial Titles
   (B) Ulrich's International Periodicals Directory
   (C) Union List of Serials

6. You can find out where a periodical is abstracted or indexed by looking in _____.
   (A) New Serial Titles
   (B) Ulrich's International Periodicals Directory
   (C) Union List of Serials

7. Union List of Serials and New Serial Titles list libraries in the _____ that receive various serials.
   (A) United States
   (B) United States and Canada
   (C) whole world

8. New Serial Titles is kept up to date by _____ and _____ issues.
   (A) monthly
   (B) quarterly
   (C) semi-annual

9. Ulrich's International Periodicals Directory is published in two volumes. Volume 1 is entitled _____; Volume 2 is entitled _____.
   (A) Scientific Serials
   (B) Basic Reference Sources
   (C) Scientific, Technical and Medical Periodicals
   (D) Arts, Humanities, Business and Social Sciences
   (E) Standard Periodicals Directory

10. You need to know the cost of an annual subscription to ISIS, a quarterly devoted to the history of science. You would begin your search for this information in _____.
    (A) New Serial Titles
    (B) Union List of Serials
    (C) Ulrich's International Periodicals Directory
    (D) N.W. Ayer and Son's Dictionary of Newspapers and Periodicals

11. The following entry appears on p. 3 of New Serial Titles, 1964, vol. 1:

616
°ACS BULLETIN. (AMERICAN CANCER SOCIETY)
NEW YORK. 1, OC8, 1951-
CaBVaU 1-

    (A) When (month, day, and year) did publication of the ACS Bulletin begin? _____.
    (B) What do the symbols, "CaBVaU 1-", at the end of the entry cited above, signify? _____
    _____

12. Since 1959 the International Statistical Institute has been responsible for an abstracting service covering journal articles and books that deal with statistical methods and theory. It performs this service with regular publication of Statistical Theory and Method Abstracts. Where would you look to confirm the title of this publication?
    (A) Ulrich's International Periodicals Directory
    (B) N.W. Ayer and Son's Directory of Newspapers and Periodicals
    (C) New Serial Titles
    (D) Union List of Serials

13. Suppose you wanted information about the cost of subscribing to the service described above (in 12). Where would you look?

_____

(A) Ulrich's International Periodicals Directory
(B) N.W. Ayer and Son's Directory of Newspapers and Periodicals
(C) New Serial Titles
(D) Union List of Serials

14. Which of the following would you assume is not listed in New Serial Titles or Union List of Serials? _____

(A) Directory of British Scientists
(B) The New York Times (the newspaper)
(C) Illinois University, Graduate School of Library Science, Monograph Series
(D) ESSO Magazine (published by ESSO Petroleum, LTD.)

15. Library personnel use the Union List of Serials primarily to determine _____.

(A) author's name
(B) the cost of subscriptions to technical journals
(C) the name and location of libraries that regularly receive and retain copies of serials and periodicals
(D) publishers of various journals

(The correct answers for the quiz are given on page 21.)

If you were able to answer most of the questions correctly you should read the remainder of this unit,and the next one, very rapidly. While most of the following material will be familiar to you, you may find some of the exercises and suggested techniques to be of interest and value.

If you were not able to answer many (or any) of the questions in the quiz, proceed carefully and you will be able to answer all of them, or at least you will know where to seek the answers, by the time you finish both units.

Turn the page and continue.

ULRICH'S INTERNATIONAL PERIODICALS DIRECTORY

Recall that our objective is not to become familiar with all the characteristics of these reference tools, but only with the characteristics that are particularly important for serials acquisition. Ulrich's (we will use this short name, from now on, for this two-volume directory) will be discussed first. It is especially useful as a source of information when your library wants to purchase (usually by subscription) serial publications. When you decide to subscribe to a magazine for personal use, you need to know how much it costs and where to send your money. Ulrich's provides this information (and much more) for thousands of serial publications from countries throughout the world.

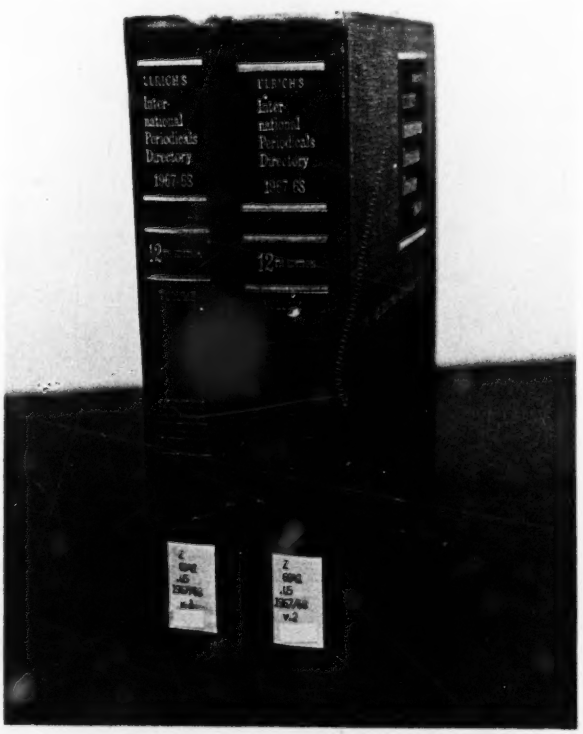

Figure 1. Ulrich's International Periodicals Directory

1. Editions, Volumes, and the Entry: In Figure 1 you see that the complete directory set consists of two volumes:

   . Volume 1 is entitled Scientific, Technical and Medical Periodicals
   . Volume 2 is entitled Arts, Humanities, Business and Social Sciences

The set illustrated (and the one you will use in this unit) is the latest currently available, volumes 1 and 2 for 1967-68. Each volume is updated in alternate years; volume 1, of the 12th edition, was published in June, 1967, but the 12th edition of volume 2 was published in 1968. In 1969, a 13th edition of Volume 1 will appear--and so on. Since two years elapse before one of the volumes is updated, a paperback supplement (to both volumes) is issued annually as an interim source of more current information. Figure 1A shows a typical supplement.

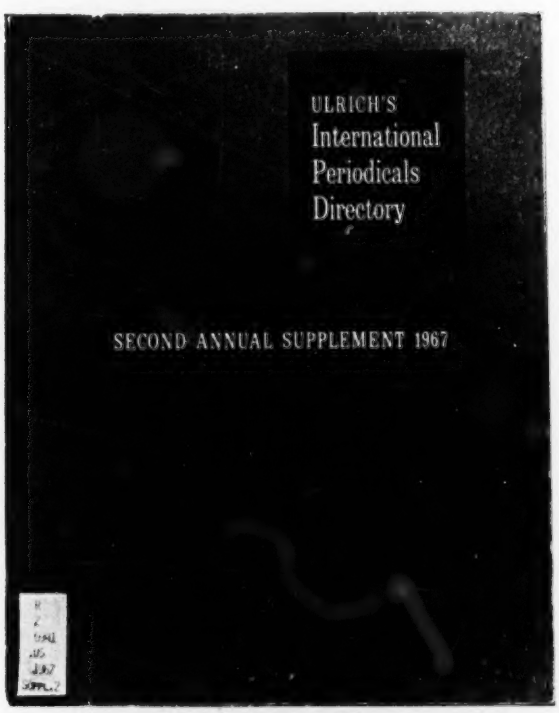

Figure 1A. A typical supplement to Ulrich's

Figure 2 shows a typical entry--that is, a complete unit of information, of the kind that Ulrich's provides for thousands of serials.

ISIS; international review devoted to the history of science and its cultural influences. 1913. q. $10. Ed. Dr. Robert P. Multhauf. Johns Hopkins Press, Baltimore, MD. 21218. adv. bibl. bk.rev. charts. illus. index. circ. 2000. Indexed: Bio.Abstr. Chem.Abstr. Eng.Ind. Ind.Med. Math.R. Soc.Sci.& Hum.Ind.

History

Figure 2. An entry from Ulrich's , page 417, Volume 1, 12th edition

From such an entry we can learn a good deal about ISIS, the serial of interest in Quiz question 10. For example, the price is $10 (per year). It is published by the press at Johns Hopkins University in Baltimore. ISIS is published quarterly ("q." in the entry) and began publication in 1913. With this information you could place an order for ISIS and fill out a "checking card" for it as well. Your library probably uses some variation of the card shown in Figure 3 to check that serials are being received as ordered, and to record the dates of receipt.

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Publisher: Johns Hopkins Press, Baltimore, Md. 21218
1966		2/4			5/2			8/14			11/3		
1967			3/15		5/9			8/3			11/7		
1968		2/2			5/13				9/15				
1969													Price: $10.00/yr.
1970													Renewal: Jan.,1971 Source: publisher
TITLE: ISIS													FREQ: quarterly

Figure 3.A typical serials "checking card" with information obtained from Ulrich's and dates of receipt for a five-year subscription.

2. Searching for the Entry in Ulrich's:"Title and Subject Index": When you need to search in Ulrich's for information about a serial whose title you have--for example, ISIS--you would use the index of titles to find the page where the entry appears. Since we already know, from the information provided in the Quiz, that ISIS deals with science,the first decision is to use Volume 1. Beginning on p. 473, in that volume, you will see a complete list of all (Volume 1) titles, in alphabetical order. Take up Volume 1 and work this exercise.

Exercise 1

Use the Title and Subject Index to:

(a) Find the page containing the entry for ISIS. (Ans: page 417)

(b) Find the page containing the entry for Journal of the Association for Computing Machinery.
Hint: look it up under Association for Computing Machinery.
(Ans: page 70)

(c) Find how often the Journal of the Association for Computing Machinery is published.
(Ans: quarterly)

(d) Find the page containing the entry for the Journal of Mathematics and Physics.
Hint: this time search the index under the word Journal.
(Ans: page 253)

In case you are wondering--and you should be--how to select the proper words in a serial title to use in searching the index, the following rule will be helpful:

> Index Searching Rule: When the serial title includes the name of an organization such as that of a university, business corporation, government department, or professional society, search the index using the first word in that name, whether or not it is the first word of the serial title. When such a name does not appear in the title search the index with the first word of the title. (Ignore articles, like "The", or "A", when they are the first words.)

For example, to find Bulletin of the Virginia Department of Agriculture, search the index in Ulrich's under Virginia rather than Bulletin. However, to find Statistical Bulletin (which is published by the Metropolitan Life Insurance Company) search under Statistical since the company name does not appear in the title. You would

search for the Journal of the American Statistical Association under American since the name of a professional society appears in the title. However, the Annals of Physics appears under Annals. Try the next exercise and you will soon learn how to apply this rule.

Exercise 2

Search the "Title and Subject Index" and record the number of the page in Ulrich's containing the entry for each of the following serials. (Note: you may have already noticed that when the index shows more than one page number for a serial it is the underlined number that designates the entry page. Numbers that are not underlined merely designate other pages where that serial title also appears.)

(a) Journal of Agriculture. University of Puerto Rico. Page _____

(b) Annals of Physics Page _____

(c) IBM Journal of Research and Development
Hint: As you probably know, IBM stands for International Business Machines; notice that all titles beginning with "words" consisting of initials are arranged in alphabetic order in the index and precede other titles for each letter of the alphabet. Page _____

(d) Bell System Technical Journal Page _____

(e) Journal of Experimental Medicine Page _____

You will need to consult the index in Volume 2 for the next two serials.

f) Journal of the American Statistical Association Page ____

g) Statistical Bulletin, published by U.S. Securities and Exchange Commission.
Do not confuse this with the serial that has the same title but is published by the Metropolitan Life Insurance Company.) Page ____

If you were not able to find the answer to any of these questions, review the Index Searching Rule and try the exercise once more before continuing with 3, below.

3. Searching for the Entry in Ulrich's: "Key to Subjects": Usually, you are given only an approximation to the correct name of a serial, and have to begin your search with that. When you know this is the case you would probably be wiser not to search the index but to go directly to the list of entries. You may have noticed already that this list is organized according to major subject headings. On pages iii and iv at the beginning of Volume 1, you will find a complete list of these subject headings under "Key to Subjects". This key, (there is one for each volume) provides the beginning and ending page numbers within which all entries in particular subject matter categories may be found. These categories are a further breakdown of subject matter beyond the twofold separation into broad areas provided by Volumes 1 and 2.

The following case actually arose in an industrial setting and illustrates the great utility of the subject matter organization of Ulrich's entries.

A scientist, after returning from a visit to Japan, asked his company librarian to subscribe to a journal published in Tokyo. The information he supplied, from memory, follows:

"I am almost certain that the journal title is Annals of Statistical Mathematics. Incidentally, don't confuse this with the American journal, Annals of Mathematical Statistics--we already subscribe to that. This Japanese journal started publishing sometime after World War II, I believe."

The librarian, quite correctly, turned to the index in each volume of Ulrich's but was unable to find the title supplied by our much travelled scientist. (She thought about calling him to see whether he knew the name of the organization or professional society that sponsors or publishes the journal--why?--but decided to try something else first.) She turned then to the "Key to Subjects" on page iv of Volume 1, where she learned that entries for mathematics are located between pages 249 and 258. She began to scan the entries beginning with page 249 and on page 252 she saw this entry.

INSTITUTE OF STATISTICAL MATHEMATICS. ANNALS.
1949. 3/yr. Exchange Basis. Ed. K. Matusita. Japan Publications Trading Co., Ltd., C.P.O. Box 722, Tokyo, Japan. stat. circ. 400.

Figure 4. An entry from Ulrich's page 252, Volume 1, 12th edition

The librarian then called her "customer", who immediately confirmed that this indeed was the journal he had in mind.

Exercise 3

You have been asked to find a serial publication for an international project concerned with the teaching of mathematics. Use the subject mathematics in Volume 1 and scan the entries in this category to see if you can locate one that fits the description. (Hint: Notice that some entries terminate with an underlined word or two. These underlined words are an aid to scanning since they often provide a clue about the content of a serial. Watch for terms like "education", "teaching", "instruction", among the underlined words, as you scan.)

REVIEW UNIT 1

You have now almost completed your instruction in the essential features of Ulrich's. (There is one additional, and extremely important, feature that is described in the next unit.) In concluding this unit, a short review is provided for the major topics you have already covered.

. Ulrich's is a two-volume set: Volume 1 is used for scientific and technical serials including medicine; Volume 2 is used for those serials dealing with the arts, humanities, business, and social sciences.

. You may search in Ulrich's for the entry, systematically, in one of two ways:

(1) Use the list of alphabetically ordered titles, "Title and Subject Index", when you are reasonably sure that you have an accurate title; remember the Index Searching Rule (on page 14) to select the proper words of the title for search. Recall also that titles whose first "word" consists entirely of initials precede all others in the index, for each letter of the alphabet.

(2) Use the "Key to Subjects" and scan the entire set of entries in a particular subject category, or related categories, when you are not sure of the title, or when you have none, for the serial in question.

. For each serial listed, Ulrich's provides information including the following items:

(1) title
(2) publisher
(3) frequency of publication
(4) price
(5) abstract and index sources

The underlined items, 4 and 5 above, are distinctive features of Ulrich's. Among the major reference tools, only Ulrich's provides price and index or abstract sources. The use of the latter, 5, is explained in the next unit in connection with two other reference tools, Union List of Serials and New Serial Titles; these two overlap Ulrich's only with respect to items 1, 2, and 3, but they also supply vital information not available in Ulrich's.

If you can spare at least 15 minutes you should now begin Unit 2. Otherwise, continue when you have at least that much time to spare.

(End of Unit 1)

ANSWERS TO QUIZ - SERIALS UNIT 1

QUIZ ANSWERS

1 - C; 2 - B; 3 - B; 4 - A,C; 5 - B; 6 - B; 7 - B; 8 - A,B; 9 - C,D; 10 - C; 11 - began publication October 8, 1951; "CaBVaU 1-" signifies that the designated library (CaBVaU designates the library of the University of British Columbia in Canada) has a complete set of this serial and continues to receive it regularly; 12 - A,C; 13 - A; 14 - B; 15 - C.

EXERCISE ANSWERS

2: a - 48, b - 383, c - 71, d - 152, e - 290, f - 1105, g - 602

3. See the entry for INTERNATIONAL STUDY GROUP FOR MATHEMATICS LEARNING on page 252 of Ulrich's.

Serials Unit 2

BIBLIOGRAPHIC TOOLS - SERIALS UNIT 2

NOTE: It is assumed that you will have completed Unit 1 before you begin this unit. If more than a few days have elapsed since you completed it, please refer to the review material on pages 19 & 20 in Unit 1 before you begin this unit. The booklet "Union List Excerpts" has been prepared to accompany this unit. This booklet contains reproductions of pages from the Union List of Serials, and must be used--in studying this unit--in place of the Union List of Serials. You will also need both volumes of Ulrich's International Periodicals Directory.

INTRODUCTION

This is the second unit devoted to serials reference tools. It has three main topics. First, the discussion of Ulrich's International Periodicals Directory, begun in Unit 1, is concluded with an explanation of the use of Ulrich's as a guide to indexes and abstracts for the contents of serial publications. Indexes and abstracts can be used to determine the precise bibliographic information (for example, journal title, article title, author's name, volume number, page numbers,) that is required for interlibrary loan requests, whether an entire volume is being sought or only a microfilm or photocopy of a particular article. The second topic in this unit is the use of the Union List of Serials in Libraries of the United States and Canada and its "companion" (for serials that originated after 1950), New Serial Titles, to find the library to which a loan or copy request should be directed. Finally, this unit gives you some advice about how to continue studying about serials on your own.

C

Ulrich's International Periodicals Directory - Conclusion

Ulrich's is a Guide to Indexes and Abstracts:[1]

A distinctive feature of Ulrich's, and a most important one, is the inclusion of index lists in the entry. For example, the last two lines of the entry in Figure 1 tell us that

> ISIS; international review devoted to the history of science and its cultural influences. 1913. q. $10. Ed. Dr. Robert P. Multhauf. Johns Hopkins Press, Baltimore, MD. 21218. adv. bibl. bk.rev. charts. illus. index. circ. 2000. Indexed: Bio.Abstr. Chem.Abstr. Eng.Ind. Ind.Med. Math.R. Soc.Sci.& Hum.Ind.
>
> History

Figure 1. An entry from Ulrich's, page 417, Volume 1, 12th edition

the contents of ISIS are indexed and/or abstracted in the following publications (which are serials themselves):

Biological Abstracts
Chemical Abstracts
Engineering Index
Index Medicus
Mathematical Reviews
Social Sciences and Humanities Index

---

[1] If the terms indexes and abstracts are vague to you, you will find it useful to read the explanations in the appendix on pages 13 & 14 before continuing.

(A complete list of spelled-out names, and their abbreviations, for all indexes and abstracts sources that appear in Ulrich's entries may be found on page xi in Volume 1 and page xxv in Volume 2.)

The word History which appears underneath the entry for ISIS is a cross-reference. It tells a user who is interested in the journal that other items of interest may appear under the subject heading History.

In the introduction to Unit 1 the following question was listed as one that could be answered by using Ulrich's:

Exercise 1

Your supervisor needs bibliographic information (volume number, page numbers, title, date, author's name) for an article on metal rusting, which appeared some time ago in Science, in order to request a photocopy of this article from a large university library. Use Volume 1 of Ulrich's to find the names of two index (or abstract) sources that are likely to contain this information. Write the names below, spelling them out completely--no abbreviations.

_____

_____

Many serial publications are not well indexed or abstracted. This is particularly true of technical journals of recent origin and of those that have small circulation. The Annals of the Institute of Statistical Mathematics, for example, is not indexed anywhere; if you look at the entry for this journal in Ulrich's, you will see that its circulation is very small.

Exercise 2

In the next section you will learn about union lists. One of these lists is a serial publication of the Library of Congress called New Serial Titles. Before proceeding, use Ulrich's to find out all you can about this publication, which is used to select a library where a request (such as that mentioned in the previous exercise) may be sent.

This exercise concludes your formal work with Ulrich's.

Union List of Serials in Libraries of the United States and Canada

and

New Serial Titles

The Purpose of Union Lists

Even a casual glance at Urlich's (which itself covers only a sample of existing serials) is enough to convince you that no library can attempt to acquire and store more than a limited number of serials. Furthermore, there are many serial volumes that are no longer available for purchase, and even a very large, but relatively new, library may not have these older issues.

Faced with these problems, librarians concluded that only by sharing their serial holdings could they reduce the cost to individual libraries of serial acquisitions, and at the same time provide better service to readers. Thus, "unions" of libraries evolved. Libraries that are members of a union agree to list their serial holdings for publication in a "union list" that is circulated widely. There are many such union lists, varying from small ones to extremely large ones. Figure 2 shows two very large and comprehensive lists.

Figure 2. Two examples of union lists

The five-volume set on the left, Union List of Serials (the rest of the name is usually omitted both in written and spoken reference to it) lists more than 100,000 serials that began publication before January 1, 1950 and that are held by nearly 1,000 cooperating libraries in the two countries. The two-volume set on the right is a cumulation of the annual issues of New Serial Titles; it is a "companion" to the Union List of Serials, and lists serials that began publication on or after January 1, 1950. In the next section you will become more intimately acquainted with the use of the Union List of Serials. You will need to refer to the [attached] booklet called "Union List Excerpts".

Union List of Serials

You have already seen, in Exercise 1, how Ulrich's may be used to locate an indexing source that would locate an article in the journal Science. But now suppose your library does not subscribe to Science, or that its holdings do not go back far enough to include the required volume. The Union List of Serials serves you at this point (rather than New Serial Titles, because, according to Ulrich's, publication of Science began before January 1, 1950) with a list of libraries that hold the required volume.

Exercise 3

(a) Turn to the section called "COOPERATING LIBRARIES," pages 1-6, in your "Excerpts" booklet. There you will see, for every State in the union (and for Canada), the symbol designators of the "union member" libraries. Look over the libraries listed for your State and determine which of them provide services such as: "furnishes photocopies," etc.

(b) The Union List of Serials entries for the Annals of the Institute of Statistical Mathematics and ISIS are on pages 18 and 19, respectively, of the booklet. Write the full name of a university library in Iowa and the extent of its holdings for ISIS and for the other serial (refer to "Sample Entry 2" on page 16 of your "Excerpts" booklet before beginning):

_____

_____

New Serial Titles

New Serial Titles appears in 9 monthly and 3 quarterly issues and is cumulated annually, quinquennially (at 5-year intervals), and decennially (at 10-year intervals). Figure 3 shows the paperback issue for January-March, 1968, and, to its left, the bound annual cumulation for 1966.

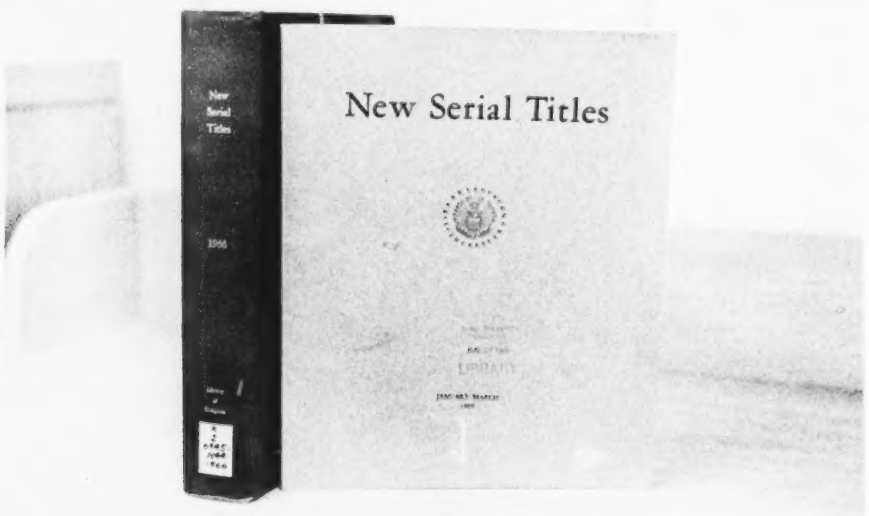

Figure 3. Annual cumulation and quarterly issue of New Serial Titles

The information contained in New Serial Titles parallels that in the Union List of Serials in both content and format. The decision whether to use the Union List of Serials or New Serials Titles to find information about serial holdings depends only on the date on which publication of the serial began:

- Before January 1, 1950: Union List of Serials
- January 1, 1950 or later: New Serial Titles

Union Lists and the Acquisitions Process

The preceding exercises and discussion have covered the most important purpose and use of these lists: to locate a library that has a given volume, or volumes, of a particular serial. However, these lists also serve another purpose. A library's decision to purchase a given serial will depend, in part, on the estimated demand for the serial and also on its availability from other libraries. Union lists play an obvious role in such decisions and in a similar situation that arises because libraries are often recipients of gifts consisting of serials.

Limitations of Union Lists

It is quite likely that your library does not subscribe to New Serial Titles and may not have copies of the Union List of Serials or of New Serial Titles cumulations. Nevertheless, it is important that you be aware of the information provided in these reference tools, and of the limitations on this information. For example, many large libraries have extensive holdings of certain serials, yet New Serial Titles or the Union List of Serials entries may not indicate this. As a general rule, the holdings of fewer than 20 libraries will be shown for a given serial. (You can see an exception to this on the last page of your "Excerpts" booklet; see the entry there for Science.) Thus, it is always worth a call, or letter, to a neighboring large library to determine whether

they have a serial that you need. If they do not have the serial, they probably do have the various union lists.

Suggestions for Further Study

A good way to review and to see how much you have already learned (and what you may not yet have learned) is to repeat the Quiz in Unit 1. For some questions you may wish to refer to Ulrich's or to your "Excerpts" booklet; feel free to do so.

Here are some suggestions that may help you in further study:

. Read the introductions and the prefaces in Ulrich's and the "Excerpts" booklet and note what serials are excluded from these works.

. Scan a few entries in the "Excerpts" booklet and see if you can decipher all the abbreviations and coded information. Check in the Introduction, Preface, Explanations, and Sample Entries sections of the booklet for the information you require. Do a similar exercise in Ulrich's. (This is one of the best ways to develop a "feel" for these reference tools.)

. Keep a notebook where you can record facts you are likely to forget--and especially those you discover on your own, while on the job or during study.

. Read in some of the standard works on reference tools and serials. You will find these two books to be quite useful:

Guide to Reference Books, Constance M. Winchell. Chicago: American Library Association, 1967

Serial Publications, Andrew D. Osborn. Chicago: American Library Association, 1955

(End of Unit 2)

APPENDIX - UNIT 2

INDEXES AND ABSTRACTS

Indexes

Most of us first became acquainted with an important index to the contents of serial publications, Reader's Guide to Periodical Literature, in high school when we needed background information for an English composition or a term paper. We could turn to this guide where location information (magazine title, volume number, page numbers) is available, for articles dealing with a particular subject, across many magazines. The Reader's Guide is an index--that is, a file of such location information in various convenient arrangements: in this case, by article title, by author's last name, and by subject.

Indexes vary from the very specialized ones to quite general ones. The Reader's Guide is general, in the sense that it indexes the contents of a large number of magazines that, for the most part, deal with "popular" subjects and have relatively large circulation: Harper's, The Atlantic Monthly, Saturday Evening Post, etc. The most specialized index would be one which covered the contents of only a single serial publication. Many technical journals, and even some popular magazines, publish such indexes (The entries in Ulrich's include an item that tells you whether this is the case for a particular serial.) There are other less restricted, but still specialized, indexes whose coverage is limited to the

serial literature in engineering--for example, Engineering Index, or, in medicine, Index Medicus; similar indexes are published, serially, for many other fields, ranging from education to meteorology.

Abstracts

An abstract, as you know, is a brief summary, usually no longer than 200 words, of the main ideas in a technical paper or magazine article. (Many scientific societies that publish technical and scientific serials now require the author to submit an abstract along with his submitted paper or article.) Among the most valuable serial publications are specialized collections of abstracts, such as Mathematical Reviews, Chemical Abstracts, and others. These offer the reader the location information provided by indexes and, in addition, a basis for deciding whether the "located" article or paper is pertinent to his interests and requirements.

SERIALS UNIT 2 - EXERCISE ANSWERS

1. The appropriate entry for the journal Science appears on page 423 of Vol. 1 of Ulrich's. The two abstracting services you would ordinarily use are Metallurgical Abstracts and Meteorological and Geoastrophysical Abstracts. It might also be useful to search Chemical Abstracts, since rusting is a chemical process. If you had the actual name of the article or the author it might be most efficient to use the index that is published by Science itself. (Notice the entry indicates that such an index in available.)

3.(a) The services that a library provides are encoded in the letters L, L*, P, and M enclosed in parentheses following the library name. See the top of page 1 in your "Excerpts" booklet for an explanation of these codes.

3.(b) According to the Union List of Serials, the library at the Iowa State University of Science and Technology at Ames has a complete set of both serials, beginning with Volume 1 for each (this fact is denoted by the symbols, "IaAS 1+", that appear in the library holdings listed within the entries for these serials). The library at the State University of Iowa, also at Ames, has a complete set of ISIS, but not the other serial.

UNION LIST EXCERPTS

(for use with Serials UNIT 2)

ERIC User Note:

The original document has been re-formatted to permit photocopying.

COOPERATING LIBRARIES

References

The symbols L, L*, P, and M following the name of a library refer to the library's facilities for lending serials and for furnishing photocopies and microfilms.

L = The library lends serials.

L* = The library restricts its lending of serials. Applications should be made in each case.

P = The library furnishes photocopies.

M = The library furnishes microfilms.

See: Direct requests for service of titles under this library location symbol to new library location symbol. Collections have either been absorbed, merged, (and/or) are now serviced by *see* library.

See also: Two symbols are used for titles under this library location symbol. Consult *see also* library location symbol for complete list of holdings of titles in this library.

Alabama

AAP Auburn University, Auburn. (L,P)
ABH Howard College, Birmingham. (L,P,M)
ABJ Jefferson County Law Library, Birmingham.
ABS Birmingham-Southern College, Birmingham.
AHRGM Army Rocket and Guided Missile Agency, Huntsville.
AMAU Air University Library, Maxwell Air Force Base, Montgomery. (L*,P,M)
ATT Tuskegee Institute, Tuskegee.
AU University of Alabama, University
AU-M —Medical Center, Birmingham. (L*,P)

Arizona

Az Arizona State Department of Library and Archives, Phoenix. (L*,P,M)
AzFhA U.S. Atomic Energy Proving Ground, Technical Library, Fort Huachuca.
AzTeS Arizona State College, Tempe. (L)
AzU University of Arizona, Tucson. (L)

Arkansas

ArU University of Arkansas, Fayetteville.
ArU-M —Medical Center Library, Little Rock. (L,M)

CMenSR Stanford Research Institute Library, Menlo Park. (L)
CMontNP U.S. Naval Postgraduate School, Monterey. See also MdAN-P
CMpS Saint Patrick's Seminary, Menlo Park.
CNoS San Fernando Valley State College, Northridge.
COMC Mills College, Oakland. (L*) See also CMC.
CPH Huntington Memorial Hospital, Pasadena.
CPS Stuart Company, Pasadena.
CPT California Institute of Technology, Pasadena. (L*,P,M)
CPomP Pacific State Hospital Library, Pomona.
CPtSH Patton State Hospital Library, Patton.
CSaT San Francisco Theological Seminary, San Anselmo.
CSd San Diego Public Library. (L,P)
CSdNEL U.S. Navy, Electronics Laboratory Library, San Diego. (L)
CSdNH U.S. Naval Hospital, San Diego.
CSdS San Diego State College, San Diego.
CSf San Francisco Public Library.
CSfA California Academy of Sciences, San Francisco. (L*,P)
CSfL San Francisco Law Library, San Francisco. (L*,P)
CSfM Mechanics Institute Library, San Francisco. (L*) See also CSfMI.
CSfMI Mechanics Institute Library, San Francisco. (L*) See also CSfM.
CSfP Pacific Union Club, San Francisco. (L)
CSfSO Standard Oil Company of California, San Francisco. (L*)

CtH Hartford Public Library.
CtHC Hartford Seminary Foundation, Hartford. (L*)
CtHHy Hillyer College Library, Hartford.
CtHT Trinity College, Hartford. (L,P)
CtHT-W —Watkinson Library. See also CtHW.
CtHW See CtHT-W.
CtHi Connecticut Historical Society, Hartford. (P,M)
CtNlC Connecticut College, New London. (L)
CtU University of Connecticut, Storrs. (L)
CtW Wesleyan University, Middletown.
CtY Yale University, New Haven. (L,P,M)
CtY-A —Art School. See CtY.
CtY-B —Osborn Memorial Laboratories (Biological Sciences). See CtY.
CtY-BS —Babylonian Seminary. See CtY.
CtY-C —Sterling Chemistry Laboratory. See CtY.
CtY-D —Divinity School Library.
CtY-E —Engineering Library. See CtY.
CtY-F —Forestry School. See CtY.
CtY-H —Hammond Metallurgical Laboratory. See CtY.
CtY-K —Kirkland Hall (Geology, etc.). See CtY.
CtY-L —Law Library.
CtY-M —Medical School Library.
CtY-MUS —School of Music Library. See also CtY-S.
CtY-O —Observatory Library. See CtY.
CtY-OS —American Oriental Society. See CtY.
CtY-P —Peabody Museum. See CtY.
CtY-S —Music School, Sprague Hall. See CtY-MUS.
CtY-T —Transportation Library. See CtY.

California

C	California State Library, Sacramento. (L,P)
C-S	—Sutro Branch, San Francisco. (L,P)
CAA	Alma College, Los Gatos. (L,P) See also CLgA.
CArctH	Humboldt State College, Arcata.
CArlS	La Sierra College Library, Arlington.
CBPac	Pacific School of Religion, Berkeley. (L*)
CBaH	Kern County General Hospital, Bakersfield.
CCC	Claremont College, Claremont. (L)
CChiS	Chico State College, Chico.
CCuH	Hughes Aircraft Company, Culver City.
CFS	Fresno State College, Fresno.
CL	Los Angeles Public Library. (L*)
CLCGH	Los Angeles County General Hospital, Los Angeles
CLCO	Los Angeles College of Optometry, Los Angeles.
CLCP	Los Angeles County Public Health Library, Los Angeles.
CLI	Immaculate Heart College, Los Angeles. (L*)
CLIA	Institute of Aeronautical Sciences, Los Angeles. (L*)
CLIN	Institute of Nervous Diseases, Los Angeles.
CLK-D	Kaiser Foundation Hospital, Doctor's Library, Los Angeles
CLL	Los Angeles County Law Library, Los Angeles. (L*,P)
CLM	Los Angeles County Medical Association, Los Angeles.
CLO	Occidental College, Los Angeles.
CLOst	College of Osteopathic Physicians and Surgeons, Los Angeles. (L*)
CLQ	Queen of Angels School of Nursing, Los Angeles.
CLS	Los Angeles State College, Los Angeles. (L)
CLSM	Southwest Museum, Los Angeles. (L*)
CLSU	University of Southern California, Los Angeles. (L,P,M)
CLSU-H	—Hancock Library of Biology. (L*,P,M)
CLSU-M	—School of Medicine Library.
CLU	University of California at Los Angeles. (L,P,M)
CLUC	—William Andrews Clark Memorial Library. (P,M)
CLWM	White Memorial Medical Library, Los Angeles. (L,P,M)
CLgA	Alma College, Los Gatos. (L,P) See also CAA.
CLobM	Memorial Hospital, Long Beach.
CLobS	Long Beach State College, Long Beach
CLobVA	U.S. Veterans Administration Hospital, Long Beach.
CLoiC	College of Medical Evangelists, Loma Linda.
CMC	Mills College, Oakland. (L*) See also COMC.
CSfSt	San Francisco State College, San Francisco. (L)
CSjC	San Jose State College, San Jose.
CSmH	Henry E. Huntington Library, San Marino. (P,M)
CSt	Stanford College Libraries, Stanford. (L*,P,M)
CSt-H	—Hoover Institution on War, Revolution and Peace. (P,M)
CSt-L	—Lane Medical Library. (L)
CStbS	University of California, Santa Barbara Library, Goleta. (L)
CStclU	University of Santa Clara, Santa Clara. (L*,P)
CStmoR	Rand Corporation, Santa Monica.
CStoC	College of the Pacific, Stockton
CU	University of California, Berkeley. (L*,P,M)
CU-A	—University of California, Davis. (L*)
CU-M	—University of California Medical Center, San Francisco. (L)
CU-Riv	—College of Arts, Letters and Science, Riverside. (L*,P)
CU-S	—Scripps Institution of Oceanography, La Jolla. (L)

Colorado

CoAT	Adams State College Library, Alamosa. (L)
CoBBS	U.S. National Bureau of Standards, Boulder Laboratories, Boulder. (L*)
CoC	Colorado Springs Public Library.
CoCA	U.S. Air Force Academy, Colorado Springs.
CoCC	Colorado College Library, Colorado Springs. (L)
CoD	Denver Public Library.
CoDB	Bibliographical Center for Research, Denver Public Library. (L,P,M)
CoDI	Iliff School of Theology, Denver.
CoDM	Medical Society of the City and County of Denver. (L)
CoDR	Regis College, Denver. (L)
CoDU	University of Denver. (L)
CoFcS	Colorado State University, Fort Collins.
CoG	Colorado School of Mines, Golden. (L*,P)
CoGrS	Colorado State College, Greeley. (L)
CoGuW	Western State College, Gunnison. (L,M)
CoLH	Loretto Heights College, Loretto. (L)
CoPC	Colorado Fuel and Iron Company Library, Pueblo.
CoU	University of Colorado, Boulder. (L,M)
CoU-M	—Medical Center Library, Denver.

Connecticut

Ct	Connecticut State Library, Hartford. (L,P)
CtBU	University of Bridgeport Library, Bridgeport.

Delaware

DeGE	Eleutherian Mills Historical Library, Greenville.
DeU	University of Delaware, Newark. (L)
DeWD	E.I. DuPont de Nemours and Company, Technical Library, Wilmington. (L*,P)
DeWI	Wilmington Institute and the New Castle County Free Library. (P)

District of Columbia

DA	U.S. National Agricultural Library. (L*,P,M)
DAL	U.S. Army Library, Pentagon Building.
DARC	American National Red Cross Library. (L)
DBB	U.S. Bureau of the Budget Library.
DBRE	Bureau of Railway Economics Library of the Association of American Railroads.
DBS	U.S. National Bureau of Standards Library. (L*)
DC	U.S. Department of Commerce Library. (L)
DCE	Carnegie Endowment for International Peace. (Collection absorbed by George Washington University) See DGW.
DCI-G	Carnegie Institution of Washington, Geophysical Laboratory Library. (L) See also DGL.
DCU	Catholic University of America Library. (L*,P,M)
DD	Dominican House of Studies, Immaculate Conception Convent Library. See also DDC.
DDC	Dominican House of Studies, Immaculate Conception Convent Library. See also DD.
DDO	Dumbarton Oaks Research Library of Harvard University. (L,P,M)
DE	U.S. Office of Education Library. (L*) See DHEW.
DES	U.S. Engineer School Library, Ft. Belvoir, Va. (L*,P)
DF	U.S. Bureau of Fisheries Library. See DI.
DFS	U.S. Federal Security Agency Library. (L*) See DHEW.
DGL	Carnegie Institution of Washington, Geophysical Laboratory Library. (L) See also DCI-G.
DGS	U.S. Geological Survey Library. See also DI-GS.
DGU	Georgetown University Library. (L,P)
DGW	George Washington University Library.
DH	U.S. National Institutes of Health.
DHEW	U.S. Department of Health, Education and Welfare. (L*) See also DE,DFS.
DHN	Holy Name College Library.
DHU	Howard University Library. (L)
DI	U.S. Department of the Interior Library. See also DF,DM.
DI-GS	—Geological Survey Library. See also DGS.

COOPERATING LIBRARIES—*Continued*

District of Columbia—*Continued*

DIC U.S. Interstate Commerce Commission Library. (L*,P)
DL U.S. Department of Labor Library. (L*)
DLC U.S. Library of Congress. (P,M)
DM U.S. Bureau of Mines Library. See DI.
DN U.S. Department of the Navy Library.
DN-HO —Navy Oceanographic Office Library.
DN-Sh —Bureau of Ships Library.
DNA U.S. National Archives Library.
DNAS-NRC National Academy of Sciences. National Research Council Library.
DNLM U.S. National Library of Medicine. (L*,P,M) See also DSG.
DNMC U.S. Naval Medical Center Library. Bethesda, Md.
DNW U.S. National War College Library. Fort McNair. (L*) See also DW.
DP U.S. Patent Office Library. (P)
DPR U.S. Public Roads Bureau Library. (L)
DPS World Health Organization. Pan American Sanitary Bureau Library. See DWHO-PSB.
DPU Pan American Union Library. (L*,P,M)
DS U.S. Department of State Library. (L*)
DSG U.S. National Library of Medicine. (L*,P,M) See also DNLM.
DSI Smithsonian Institution Library. (L,P,M)
DSI-A —Astrophysical Laboratory Library.
DSI-C —National Collection of Fine Arts.
DSI-E —Bureau of American Ethnology Library.
DSI-F —Freer Gallery of Art Library.
DSI-M —National Museum Library.
DSI-N —National Air Museum Library
DSI-R —Division of Radiation and Organisms Library.
DSI-Z —National Zoological Park Library.
DT U.S. Department of the Treasury Library.
DTr Trinity College Library. (L*)
DW U.S. National War College Library. Fort McNair. (L*) See also DNW.
DWB U.S. Weather Bureau Library. (L)
DWHO-PSB World Health Organization. Pan American Sanitary Bureau Library. See also DPS.
DWP Public Library of the District of Columbia. (L*)
DWR U.S. Walter Reed Army Hospital Library.
DWRI U.S. Walter Reed Army Institute of Research Library.

Illinois

I Illinois State Library. Springfield. (L,P,M)
IArg Argonne National Library. Lemont.
IC Chicago Public Library. (L*,P,M)
ICA Armour Institute o' Technology. Chicago. (L,P) See ICI.
ICAC American College of Surgeons Library. Chicago. See also ICS. (Collection dispersed)
ICB Art Institute of Chicago. (Includes Burnham Library and Ryerson Library) (L*,P,M)
ICD DePaul University. Chicago. (L)
ICF Chicago Natural History Museum. Chicago. (L*)
ICI Illinois Institute of Technology. Chicago. (L,P) See also ICA.
ICI-A —Armour Research Foundation. (L,P)
ICHi Chicago Historical Society. Chicago. (L*,P,M)
ICJ John Crerar Library. Chicago. (L*P,M)
ICJS College of Jewish Studies. Chicago.
ICL Loyola University. Chicago. (L*)
ICM Meadville Theological School. Chicago. (L)
ICMILC Mhlwest Inter-Library Center. Chicago. (L,P,M)
ICMcC McCormick Theological Seminary. Chicago. (L*) See also ICP
ICMu Mundelein College. Chicago. (L)
ICN Newberry Library. Chicago. (L*,P,M)
ICNB Northern Baptist Theological Seminary. Chicago. (L)
ICP Presbyterian Theological Seminary. Chicago. (L*) See also ICMcC
ICR Art Institute. Ryerson Library Chicago. (L*,P,M) See ICB
ICRM Rush Medical College Library. Chicago. See also ICU-R
ICS American College of Surgeons. Chicago. (L) See also ICAC. (Collection dispersed)
ICSo Southern Illinois University. Carbondale. (L*,P,M) See also ICarbS.
ICT Chicago Theological Seminary. Chicago. (L,P,M)
ICU University of Chicago. Chicago. (L,P,M)
ICU-R —Rush Medical College Library. See ICRM.
ICUSQ U.S Quartermaster Corps. Food and Container Institute. Chicago.
ICW Western Society of Engineers. Chicago. (P,M)
ICarbS Southern Illinois University. Carbondale. (L*,P,M) See also ICSo.
InTI Indiana State Teachers College. Terre Haute.
InTR Rose Polytechnic Institute. Terre Haute. (L)
InU Indiana University. Bloomington. (L,P)
InU-D —School of Dentistry Library.
InU-L —Law Library.
InU-M —School of Medicine Library. Indianapolis. (L,P)

Iowa

Ia Iowa State Traveling Library. Des Moines. (L,P) See also Ia-T.
Ia-M Iowa State Medical Library. Des Moines. (L) See also IaM.
Ia-T Iowa State Traveling Library. Des Moines. (L,P) See also Ia
IaAS Iowa State University of Science and Technology. Ames. (L,P,M)
IaCfT Iowa State Teachers College. Cedar Falls. (L*,P)
IaDm Des Moines Public Library. (L,P)
IaDmD Drake University. Des Moines. (L)
IaGG Grinnell College. Grinnell. (L)
IaHi State Historical Society of Iowa. Iowa City. (L*)
IaM Iowa State Medical Library. Des Moines. (L) See also Ia-M
IaU State University of Iowa. Iowa City. (L*,P,M)
IaU-L —College of Law Library. (L)

Kansas

K Kansas State Library. Topeka. (L)
KAM Mount Saint Scholastica College. Atchison.
KAS St. Benedict's College. Atchison. (L,P)
KEmT Kansas State Teachers College. Emporia.
KHayF Fort Hays Kansas State College. Hays.
KHi Kansas State Historical Society. Topeka.
KKcB Central Baptist Theological Seminary. Kansas City. (L)
KMK Kansas State University. Manhattan. (L*,P)
KPT Kansas State Teachers College. Pittsburg. (L,P)
KStMC St. Mary's College. Divinity School of St. Louis University. St. Mary's (L*) See also MoSU-D.

Florida

F Florida State Library, Tallahassee. (L*.P)
FCU University of Miami, Coral Gables. (L*) See also FMU
FCU-L —Law Library. (P)
FDS John B. Stetson University, DeLand. (L)
FJ Jacksonville Free Public Library. (L)
FLIS Florida Southern College, Lakeland.
FM Miami Public Library. (L* P.M)
FMU University of Miami, Coral Gables. (L*) See also FCU
FPY J.C. Yonge Library, Pensacola. Now merged with the University of Florida Library. See FU.
FPcNM U.S. Navy Mine Defense Laboratory. Technical Library, Panama City.
FTS Florida State University, Tallahassee. See also FTaSU
FTU University of Tampa.
FTaFA Florida Agricultural and Mechanical University, Tallahassee.
FTaSU Florida State University, Tallahassee. See also FTS
FU University of Florida, Gainesville. (L.P.M)
FU-HC —J. Hillis Miller Health Center Library. (P)

Georgia

G Georgia State Library, Atlanta. (L.P)
GA Atlanta Public Library. (L*.P)
GACDC U.S. Communicable Disease Center Library, Atlanta.
GAT Georgia Institute of Technology, Atlanta. (L.P.M)
GAU Atlanta University.
GDC Columbia Theological Seminary, Decatur.
GDS Agnes Scott College, Decatur. (L)
GEU Emory University, Atlanta. (L.P)
GEU-M —A.W. Calhoun Medical Library. (L.P)
GHi Georgia Historical Society, Savannah. (L.P)
GMM Mercer University, Macon. (L)
GMW Wesleyan College, Macon.
GMIW Georgia State College for Women, Milledgeville. (L)
GOU Ogiethorpe University. (L.M)
GS Savannah Public Library. (L.P)
GU University of Georgia, Athens. (L.P.M)
GU-A —Agricultural Library.
GU-Ex —Georgia State College of Business Administration Library. Atlanta. (L.P)

Hawaii

H Library of Hawaii, Honolulu. (L)
HHiS Hawaiian Sugar Planters' Association, Experiment Station, Honolulu. (P.M)
HU University of Hawaii, Honolulu. (L*.P.M)

Idaho

IdPI Idaho State College, Pocatello. (L) See also IdU-S.
IdU University of Idaho, Moscow. (L.P)
IdU-L —Law Library.
IdU-S —Southern Branch, Pocatello. (L) See IdPI.

IEE National College of Education, Evanston. (L)
IEG Garrett Biblical Institute, Evanston.
IEN Northwestern University, Evanston. (L*.P.M)
IEN-C —Joseph Schaffner Library of Commerce, Chicago. (L)
IEN-D —Dental School Library, Chicago.
IEN-L —Law Library, Chicago. (L*.P)
IEN-M —Medical School Library. (L*)
IGK Knox College, Galesburg. (L)
IHi Illinois State Historical Library, Springfield. (L*.P.M)
ILS St. Procopius College, Lisle. (L)
IMS St. Mary of the Lake Seminary, Mundelein. (L) See also IMunS
IMunS St. Mary of the Lake Seminary, Mundelein. (L) See also IMS.
INS Illinois State Normal University, Normal.
INcA Abbott Laboratories, North Chicago. (L*)
IPB Bradley University, Peoria.
IRA Augustana College Library, Rock Island. (L*.P.M)
ISkH Hebrew Theological College, Skokie.
IU University of Illinois, Urbana. (L*.P.M)
IU-CU —Chicago Undergraduate Division. See also IU-U
IU-M —Medical Sciences Library, Chicago. (L)
IU-U —Chicago Undergraduate Division, Chicago. See also IU-CU

Indiana

In Indiana State Library, Indianapolis. (L*.P)
InAndC-TAnderson College, Graduate School of Theology Library, Anderson.
InCW Wabash College, Crawfordsville. (L)
InE Evansville and Vanderburg County Public Library, Evansville. (L.P)
InElkM Mennonite Biblical Seminary Library, Elkhart. (L.P)
InFC Franklin College of Indiana, Franklin. See also InFrlC.
InFrlC Franklin College of Indiana, Franklin. See also InFC.
InFw Public Library of Fort Wayne and Allen County, Fort Wayne.
InGD DePauw University, Greencastle. (L.P) See also InGrD.
InGO Goshen College, Goshen.
InGrD DePauw University, Greencastle. (L.P) See also InGD.
InI Indianapolis Public Library. (L*)
InIA Indiana Academy of Science, Indianapolis. (L*.P)
InIB Butler University, Indianapolis. (L)
InIJ John Herron Art Institute, Indianapolis. (L)
InIL Eli Lilly and Company, Indianapolis. (L.P.M)
InLP Purdue University, Lafayette. (L.P.M)
InNU University of Notre Dame, Notre Dame. (L.P) See also InNd.
InNd University of Notre Dame, Notre Dame. (L.P) See also InNU.
InNhW Workingmen's Institute Library, New Harmony.
InRE Earlham College, Richmond. (L.P)
InRenS St. Joseph's College, Rensselaer.
InS South Bend Public Library. (L) See also InSb
InSb South Bend Public Library. (L) See also InS.
InSt St. Meinrad's Archabbey, St. Meinrad. (L) See also InStme.
InStme St. Meinrad's Archabbey, St. Meinrad. (L) See also InSt.
InT Emeline Fairbanks Memorial Library, Terre Haute. See also InTE.
InTE Emeline Fairbanks Memorial Library, Terre Haute. See also InT.

KT Topeka Free Public Library.
KU University of Kansas, Lawrence. (L.P.M)
KU-M —Medical Center Library, Kansas City. (L)
KWi Wichita City Public Library. (L*.P)

Kentucky

KyBB Berea College, Berea.
KyBgW Western Kentucky State College, Bowling Green. (L*)
KyL Louisville Free Public Library.
KyLF Filson Club, Louisville. (P)
KyLL Louisville Presbyterian Seminary Library. See also KyLoL.
KyLS Southern Baptist Theological Seminary Library, Louisville. See also KyLoS.
KyLU University of Louisville. (L) See also KyLoU.
KyLU-M —Medical Library (L.P) See also KyLoU-M.
KyLoL Louisville Presbyterian Seminary Library. See also KyLL.
KyLoS Southern Baptist Theological Seminary Library, Louisville. See also KyLS.
KyLoU University of Louisville. (L) See also KyLU.
KyLoU-M—Medical Library. (L.P) See also KyLU-M
KyLxCB College of the Bible, Lexington.
KyLxT Transylvania College, Lexington.
KyMurT Murray State College, Murray.
KyRE Eastern Kentucky State College, Richmond. (L)
KyU University of Kentucky, Lexington. (L.P.M)
KyU-M —Medical Center, King Library. (L.P.M)

Louisiana

LMN Northeast Louisiana State College, Monroe.
LN New Orleans Public Library.
LND Dillard University Library, New Orleans.
LNHT Tulane University, Howard-Tilton Memorial Library—(Includes checking for Howard-Tilton Memorial Library, Newcomb College, and the Middle American Research Institute.)
LNL Loyola University, New Orleans. (L)
LNL-L —Law Library.
LNS U.S. Department of Agriculture, Southern Utilization Research and Development Division, Agricultural Research Service, New Orleans. (Formerly Southern Regional Research Laboratory)
LNT-M Tulane University, Matas Medical Library, New Orleans. (L)
LNTC International House, Cunningham Library, New Orleans. (L*.P)
LNX Xavier University Library, New Orleans. (L)
LU Louisiana State University, Baton Rouge. (L.P.M)
LU-L —Law Library. (L*.P)
LU-M —Medical Library, New Orleans. (L.P.M)

Maine

Me Maine State Library, Augusta. (L*)
MeB Bowdoin College, Brunswick. (L)
MeBa Bangor Public Library. (L.P)
MeHi Maine Historical Society, Portland. (P)

COOPERATING LIBRARIES—*Continued*

MeLB Bates College, Lewiston. (L*)
MeP Portland Public Library. (L*)
MeU University of Maine, Orono. (L,P)
MeWC Colby College, Waterville. (L*)

Maryland

MdAN U.S. Naval Academy, Annapolis. (L*,P)
MdAN-P —Postgraduate School. (L) See CMontNP.
MdBA Walters Art Gallery, Baltimore. (L,P) See also MdBWA.
MdBCN College of Notre Dame of Maryland, Baltimore.
MdBE Enoch Pratt Library, Baltimore. (L*,P)
MdBG Goucher College, Baltimore. (L)
MdBJ Johns Hopkins University, Baltimore. (L*,P,M)
MdBJ-W —William H. Welch Medical Library. (L,P,M) See also MdBW.
MdBL Loyola College, Baltimore.
MdBM Medical and Chirurgical Faculty of the State of Maryland, Baltimore. (L,P)
MdBP Peabody Institute, Baltimore. (L*, P,M)
MdBW William H. Welch Medical Library, Baltimore. (L,P,M) See also MdBJ-W.
MdBWA Walters Art Gallery, Baltimore. (L,P) See also MdBA.
MdEdgW U.S. Army Chemical Center, Technical Library, Edgewood.
MdToT Maryland State Teachers College, Towson.
MdU University of Maryland, College Park. (L*,P)
MdU-B —University of Maryland, Baltimore. (L) See also MdU-H.
MdU-H —Health Sciences Library, Baltimore. (L) See also MdU-B.

Massachusetts

M Massachusetts State Library, Boston. (L,P)
MA Amherst College, Amherst. (L)
MAA University of Massachusetts, Amherst. (L) See also MU.
MB Boston Public Library. (L*,P,M)
MBA American Academy of Arts and Sciences, Boston. (L,P)
MBAt Boston Athenaeum, Boston. (L*P,M)
MBC Congregational Library, Boston. (L,P,M)
MBH Massachusetts Horticultural Society, Boston.
MBM Boston Medical Library, Boston. (L,P)
MBMu Boston Museum of Fine Arts, Boston. (L*)
MBN Boston Society of Natural History, Boston. (L*)
MBNU Northeastern University, Boston. (L*,P)
MBP Massachusetts College of Pharmacy, Boston. (L)
MBS Social Law Library, Boston.
MWelC Wellesley College, Wellesley. (L*)
MWhB Marine Biological Laboratory, Woods Hole. (L*)
MWiW Williams College, Williamstown. (L)

Michigan

Mi Michigan State Library, Lansing.
MiAlC Albion College, Albion. (L*) See also MiAlbC.
MiAlbC Albion College, Albion. (L*) See also MiAlC.
MiD Detroit Public Library. (L*,P,M)
MiD-A —Institute of Arts. (L) See also MiDA.
MiD-B —Burton Historical Collection. (L*,P,M)
MiDA Detroit Institute of Arts. (L) See also MiD-A
MiDGMR General Motors Corporation, Research Laboratories Division, Warren.
MiDM Marygrove College, Detroit. (L)
MiDU University of Detroit, Detroit. (L)
MiDW Wayne State University, Detroit. (L*,P,M)
MiDW-M —Medical Library.
MiDbF Ford Motor Company, Dearborn. (L,P)
MiEM Michigan State University, East Lansing. (L)
MiFlic Flint College, Charles Stewart Mott Library, Flint.
MiGr Grand Rapids Public Library. (L,P)
MiHM Michigan College of Mining and Technology, Houghton. (L,P)
MiKW Western Michigan University, Kalamazoo. (L)
MiMid Dow Chemical Company, Midland. (L*,P) See also MiMidD.
MiMidD Dow Chemical Company, Midland. (L*,P) See also MiMid.
MiMu Hackley Public Library, Muskegon. (L)
MiU University of Michigan, Ann Arbor. (L,P,M)
MiU-C —William L. Clements Library. (P,M)
MiU-G —Bureau of Government Library. See MiU.
MiU-L —Law Library. (L*,P,M)

Minnesota

MnCS St. John's University, Collegeville.
MnHi Minnesota Historical Society, St. Paul. (L*,P,M)
MnM Minneapolis Public Library. (L*,P)
MnMA Augsburg College and Theological Seminary, Minneapolis.
MnMH Hennepin County Medical Society, Minneapolis. (L*) See also MnMHCM.
MnMHCM Hennepin County Medical Society, Minneapolis. (L*) See also MnMH.
MnMMH Minneapolis-Honeywell Regulator Company, Minneapolis
MnNC Carleton College, Northfield. (L)
MnRM Mayo Clinic Library, Rochester. (L*)
MnS St. Paul Public Library.
MnSH Hamline University, St. Paul. (L*)
MnSJ James Jerome Hill Reference Library, St. Paul

Montana

MtBC Montana State College, Bozeman. (L,P)
MtBuM Montana School of Mines, Butte. (L) See also MtU-M.
MtU Montana State University, Missoula. (L*,P)
MtU-M Montana School of Mines, Butte. (L) See also MtBuM.

Nebraska

NbHi Nebraska State Historical Society, Lincoln. (L*,P,M) See also NbLS.
NbLS Nebraska State Historical Society, Lincoln. (L*,P,M) See also NbHi.
NbO Omaha Public Library.
NbOC Creighton University, Omaha.
NbU University of Nebraska, Lincoln. (L,P,M)
NbU-M —College of Medicine Library, Omaha.

Nevada

Nv Nevada State Library, Carson City. (L,P)
NvU University of Nevada, Reno. (L)

New Hampshire

Nh New Hampshire State Library, Concord.
NhD Dartmouth College, Hanover. (L,P)
NhM Manchester City Library. (L)
NhU University of New Hampshire, Durham. (L,P)

New Jersey

NJ New Jersey State Library, Archives and History, Trenton.
NJBIM Academy of Medicine of New Jersey, Bloomfield. (L,P,M)
NJHoS Stevens Institute of Technology, Hoboken. (L,P,M)
NJMD Drew University, Madison. (L)
NJMuA Air Reduction Company, Inc. Central Research Department Library, Murray Hill. (L*)
NJMuB Bell Telephone Laboratories, Murray Hill. (L)
NJN Newark Public Library.
NJNbN New Jersey College for Women, New Brunswick. See NjR; also NJR-W.
NJNbS Gardner A. Sage Library, New Brunswick. (L*)
NJNbSI Squibb Institute for Medical Research, New Brunswick. (P)
NJP Princeton University, Princeton. (L,P,M)
NJPT Princeton Theological Seminary, Princeton. (L,P,M)
NJPatSC Paterson State College, Paterson.

MBSI Simmons College, Boston. (L*,P)
MBU Boston University.
MBU-E —School of Education Library.
MBU-L —School of Law Library.
MBU-M —School of Medicine Library. (L,P)
MBU-T —School of Theology Library.
MBdAF U.S. Air Force, Cambridge Research Center, Bedford.
MBtS St. John's Seminary Library, Brighton.
MCE Episcopal Theological School, John Gordon Wright Library, Cambridge. (L*)
MCM Massachusetts Institute of Technology, Cambridge. (P,M)
MChB Boston College, Chestnut Hill.
MChB-W —Weston College School of Philosophy and School of Theology Library, Weston. (L*)
MH Harvard University, Cambridge. (Represents central collection of college library and smaller miscellaneous libraries) (L*,P,M)
MH-A —Arnold Arboretum, Jamaica Plain. (L*,P,M)
MH-AH —Andover-Harvard Theological Seminary Library. (L*,P,M)
MH-BA —Graduate School of Business Administration Library (L*,P,M)
MH-BH —Blue Hill Meteorological Observatory, Milton. (L*,P,M)
MH-BL —Biological Laboratories Library.
MH-F —Farlow Reference Library. (L*,P,M)
MH-G —Gray Herbarium Library.
MH-L —Law School Library. (L*,P,M)
MH-M —Schools of Medicine, Public Health and Dental Medicine, Boston. (L*,P,M)
MH-O —Astronomical Observatory, Phillips Library.
MH-P —Peabody Museum Library. (L)
MH-Z —Museum of Comparative Zoology Library. (L,P,M)
MHILC Hampshire Inter-Library Center, Inc., South Hadley (L*)
MHi Massachusetts Historical Society, Boston
MLowT Lowell Textile Institute, Lowell. (L*)
MMeT Tufts University, Medford. (L*,P)
MMeT-F —Fletcher School of Law and Diplomacy. (L*)
MMeT-M —Medical and Dental School, Boston.
MNF Forbes Public Library, Northampton
MNS Smith College, Northampton. (L)
MNatQ U.S. Quartermaster Research and Development Center, Natick. (L*)
MNoW Wheaton College, Norton. (L*)
MNoanM Merrimack College Library, North Andover. (L*)
MPB Berkshire Athenaeum, Pittsfield. (L,P,M)
MSM Mount Holyoke College, South Hadley. (L) See also MShM.
MShM Mount Holyoke College, South Hadley. (L) See also MSM.
MU University of Massachusetts, Amherst. (L) See also MAA.
MWA American Antiquarian Society, Worcester. (P)
MWC Clark University, Worcester. (L)
MWH College of the Holy Cross, Worcester. (L,P)
MWM Worcester Art Museum, Worcester. (L,P)
MWalB Brandeis University, Waltham

MnSR Ramsey County Medical Society, St. Paul. (L) See also MnSRM
MnSRM Ramsey County Medical Society, St. Paul. (L) See also MnSR.
MnSS St. Paul Seminary. (L,M)
MnSSC College of St. Catherine, St. Paul. (L,P,M)
MnSST College of St. Thomas, St. Paul. (L)
MnU University of Minnesota, Minneapolis. (L* P,M)
MnU-A —Department of Agriculture Library, St. Paul.
MnU-L —Law Library. (L*,P,M)

Mississippi

MsAr State Department of Archives and History, Jackson. (L) See also MsJS
MsAM Alcorn Agricultural and Mechanical College, Lorman. (L)
MsJS State Department of Archives and History, Jackson. See also MsAr.
MsSM Mississippi State University, State College. (L)
MsU University of Mississippi, Oxford. (L,P)
MsU-M —Medical Center Library, Jackson.

Missouri

MoCA Conception Abbey and Seminary Library, Conception. (L) See also MoConA.
MoConA Conception Abbey and Seminary Library, Conception. (L) See also MoCA.
MoFC Central College, Fayette. (L*,P,M)
MoK Kansas City Public Library. (L*,P)
MoKL Linda Hall Library, Kansas City. (L,P,M)
MoRM University of Missouri School of Mines and Metallurgy, Rolla. (L,P,M)
MoS St. Louis Public Library. (L*,P)
MoSA Academy of Science Library, St. Louis. (Library abolished. Collection in the University of Missouri. See MoU)
MoSB Missouri Botanical Garden, St. Louis. (L)
MoSC Catholic Central Verein of America, St. Louis.
MoSCS Concordia Seminary Library, St. Louis. (L*)
MoSM St. Louis Medical Society Library. (L) See also MoSMed.
MoSMed St. Louis Medical Society Library. (L) See also MoSM.
MoSMon Monsanto Chemical Company, St. Louis. (L*)
MoSR City Art Museum, Richardson Memorial Library, St. Louis. (L)
MoSU St. Louis University. (L,P)
MoSU-D —Divinity School. (L*) See KStMC.
MoSU-L —School of Law Library.
MoSU-M —School of Medicine Library. (L)
MoSW Washington University, St. Louis. (L* P,M)
MoSW-L —School of Law Library. (L*)
MoSW-M —Medical School Library.
MoU University of Missouri, Columbia. (L,P,M)

NJR Rutgers University, New Brunswick. (L*,P,M)
NJR-N Rutgers University Libraries, Newark. See NJR
NJR W New Jersey College for Women, New Brunswick. See NJR; also NJNbN
NJT Trenton Free Library. (L,P)

New Mexico

NmAS Sandia Corporation Library, Albuquerque.
NmScS New Mexico State University of Agriculture, Engineering and Science, University Park. (L,P) See also NmUpU.
NmU University of New Mexico, Albuquerque. (L)
NmUpU New Mexico State University of Agriculture, Engineering and Science, University Park. (L,P) See also NmScS.

New York

N New York State Library, Albany. (L,P)
NAA Albany Medical College Library, Albany. See also NAlA.
NAW Wells College, Aurora. (L) See also NAurW
NAlA Albany Medical College Library, Albany. See also NAA.
NAlT State University of New York, Albany.
NAnB Bard College, Annandale-on-Hudson. (L,P)
NAurW Wells College, Aurora. (L) See also NAW
NB Brooklyn Public Library, Brooklyn. (L*,P)
NBB Brooklyn Museum Libraries, Brooklyn. (L)
NBB-E —Wilbour Library of Egyptology.
NBC Brooklyn College, Brooklyn. (L*)
NBG Brooklyn Botanic Garden, Brooklyn. (L)
NBM Medical Society of the County of Kings and Academy of Medicine of Brooklyn Library, Brooklyn. (L*,P)
NBP Pratt Institute, Brooklyn. (L)
NBS St. John's University Libraries, Jamaica. (L*,P) See also NNStJ
NBSU-M State University of New York, College of Medicine, Downstate Medical Center Library, Brooklyn.
NBiSU-H State University of New York, Harpur College, Binghampton.
NBronSL Sarah Lawrence College, Bronxville.
NBu Buffalo and Erie County Public Library, Buffalo. (Formed by the merging of the Buffalo Public Library, Erie County Public Library and Grosvenor Library in 1954.) (L*) See also NBuG.
NBuB Buffalo Society of Natural Sciences, Buffalo. (L)
NBuG Buffalo and Erie County Public Library, Grosvenor Reference Division, Buffalo. (L*) See NBu.

New York—*Continued*

NBuRP Roswell Park Memorial Institute. Buffalo.
NBuT State University of New York. College of Education at Buffalo. Buffalo.
NBuU University of Buffalo. Buffalo.
NBuU-M —Medical School Library.
NCE Carnegie Institution. Department of Genetics. Cold Spring Harbor. (L) See also NCsC.
NCH Hamilton College. Clinton. (L,P)
NCaS St. Lawrence College. Canton. (L,P)
NCsC Carnegie Institution. Department of Genetics. Cold Spring Harbor. (L) See also NCE.
NFQC Queens College Library. Flushing. See also NNQC.
NGH Colleges of the Seneca. Geneva. (Formerly Hobart College)
NHC Colgate University. Hamilton.
NHi New York Historical Society. New York. (P,M) See also NNHi.
NiC Cornell University. Ithaca. (L,P,M)
NiC-A —State Colleges of Agriculture and Economics. (L,P,M) See NiC.
NN New York Public Library. (P,M)
NN-M —Municipal Reference Library. (L)
NNA American Geographical Society. New York. (L*,P)
NNAB American Bible Society. New York.
NNAF American Foundation for the Blind. New York. (L)
NNAN American Numismatic Society. New York. (L,M)
NNB Association of the Bar of the City of New York. New York. (P)
NNBG New York Botanical Garden. Bronx Park. New York. (L,P)
NNC Columbia University. New York. (L*,P,M)
NNC-L —Law Library. (L*,P,M)
NNC-M —Medical Library. (L,P,M)
NNC-T —Teachers College Library. (L,P,M)
NNCC Chemists Club. New York. (P)
NNCo Collectors Club. New York.
NNCoC College of the City of New York. New York. See also NSCoC)
NNCoCl College of the City of New York. New York. See also NNCoC.
NNCoo Cooper Union Library. New York. (L,P,M)
NNCorM Cornell University Medical College Library. New York.
NNE Engineering Societies Library. New York. (P,M)
NNF Fordham University. New York. (L*)
NNFr Frick Art Reference Library. New York. (P)
NNG General Theological Seminary of the Protestant Episcopal Church. New York.
NNGr Grolier Club Library. New York. (L*,P)
NNHeb Hebrew Union College. Jewish Institute of Religion Library. New York.
NNHi New York Historical Society. New York. (P,M) See also NHi.
NNIO Presbyterian Hospital. Institute of Ophthalmology. New York. (L) See also NNPH-O
NNJ Jewish Theological Seminary of America. New York.
NNJI Japan Institute. New York. Institute no longer in existence. Collection transferred in the main to the Library of Congress) See DLC
NRenSW Sterling Winthrop Research Institute. Rensselaer. (L*)
NSU Syracuse University. Syracuse. (L*,P) See also NSyU
NSU-F State University of New York. College of Forestry. Syracuse. (L) See also NSySU-F.
NSU-M State University of New York. Upstate Medical Center. Syracuse. (L,P) See also NSySU-M
NSchGER General Electric Company. Research Laboratory. Schenectady. (L*)
NSchGER-KA —Knolls Atomic Power Laboratory. Technical Library.
NSchGER-M —Main Library
NSchU Union College. Schenectady. (L)
NSaS Skidmore College. Saratoga Springs. (L)
NStC St. Bonaventure University. St. Bonaventure. (L)
NSy Syracuse Public Library
NSySU-F State University of New York. College of Forestry. Syracuse. (L) See also NSU-F.
NSySU-M State University of New York. Upstate Medical Center. Syracuse. (L,P) See also NSU-M.
NSyU Syracuse University. Syracuse. (L*,P) See also NSU
NTR Rensselaer Polytechnic Institute. Troy. (L,P)
NUtC Utica College of Syracuse University. Utica.
NWM U.S. Military Academy. West Point. (L*,P)
NWhp White Plains Public Library.
NYBT Boyce Thompson Institute for Plant Research. Yonkers. (L)

North Carolina

Nc North Carolina State Library. Raleigh. (L*,P)
NcD Duke University. Durham. (L,P,M)
NcD-H —Duke Hospital Library
NcD-L —School of Law Library
NcDurC North Carolina College at Durham.
NcDurCR Chemstrand Corporation Research Center, Inc., Durham.
NcGA North Carolina Agricultural and Technical College. Greensboro.
NcGW Woman's College of the University of North Carolina. Greensboro. (L)
NcGrE East Carolina College. Greenville
NcGuG Guilford College. Guilford. (L*)
NcMtH Historical Foundation of the Presbyterian and Reformed Churches. Montreat.
NcRS North Carolina State College of Agriculture and Engineering. Raleigh. (L)
NcU University of North Carolina. Chapel Hill. (L,P,M)
NcU-F —Institute of Fisheries. Research Library. Morehead City.
NcU-H —Division of Health Affairs. (North Carolina Memorial Hospital)
NcU-L —Law School.
NcWfSB Southeastern Baptist Theological Seminary Library. Wake Forest. (L*)
NcWs Public Library of Winston-Salem and Forsythe County. Winston-Salem.
NcWsW Wake Forest College.

OHi Ohio State Historical Society. Columbus. (P,M)
OKentC Kent State University. Kent. (L)
OMC Marietta College. Marietta. (L,P)
OO Oberlin College. Oberlin.
OOxM Miami University. Oxford.
OPosmG Goodyear Atomic Corporation. Portsmouth.
OSW Wittenberg College. Springfield.
OT Toledo Public Library. (L,P,M)
OU Ohio State University. Columbus. (L*,P,M)
OWC College of Wooster. Wooster. (L)
OY Public Library of Youngstown and Mahoning County. Youngstown.
OYesA Antioch College. Yellow Springs.

Oklahoma

Ok Oklahoma State Library. Oklahoma City. (L)
OkEP Phillips University. Enid. (L)
OkS Oklahoma State University. Enid. (L*,P)
OkT Tulsa Public Library. (L,P,M)
OkTU University of Tulsa. (L*,P,M)
OkU University of Oklahoma. Norman. (L,M)
OkU-M —School of Medicine and University Hospitals. Oklahoma City.

Oregon

OrCA Oregon State University. Corvallis. (L,P) See also OrCS.
OrCS Oregon State University. Corvallis. (L,P) See also OrCA
OrHi Oregon Historical Society. Portland
OrP Library Association of Portland. (P)
OrPL Lewis and Clark College Library. Portland.
OrPR Reed College. Portland. (L)
OrPS Portland State College. Portland
OrPU University of Portland. Portland (L)
OrPW Western Evangelical Seminary. Portland.
OrStbM Mount Angel Abbey. Saint Benedict (L*)
OrU University of Oregon. Eugene (L*,P,M)
OrU-M —Medical School. Portland.

Pennsylvania

P Pennsylvania State Library. Harrisburg. (L,P)
PBL Lehigh University. Bethlehem. (L,P)
PBS Bethlehem Steel Company. Bethlehem.
PBtG Geneva College. Beaver Falls. (L)
PBm Bryn Mawr College. Bryn Mawr. (L*)
PCA American Baptist Historical Society. Chester. (L*) See NRAB
PCC Crozer Theological Seminary. Chester. (L)
PCaD Dickinson College. Carlisle. (L,P) See also PCarlD.
PCarlD Dickinson College. Carlisle. (L,P) See also PCaD.
PChW Wilson College. Chambersburg.

NNM American Museum of Natural History. New York. (L,P)

NNMM Metropolitan Museum of Art Library. New York. (P)

NNN New York Academy of Medicine. New York. (L*,P,M) See also NNNAM.

NNNAM New York Academy of Medicine. New York. (L*,P,M) See also NNN.

NNNPsi New York Psychiatric Institute Library. New York. See also NNS.

NNNPsan New York Psychoanalytic Institute. New York. See also NNP.

NNP New York Psychoanalytic Institute. New York. See also NNNPsan.

NNPH-O Presbyterian Hospital, Institute of Opthalmology. New York. (L) See also NNH.

NNQC Queens College. Flushing. See also NFQC.

NNR Russell Sage Foundation. New York. (The Russell Sage Foundation Library was discontinued in the late summer, 1949. The collection was divided between the New York School of Social Work, the College of the City of New York, the New York Public Library and some special items were retained by the Foundation. Cf. Russell Sage Foundation. Annual Report, 1948/49. p. 32)

NNRI Rockefeller Institute for Medical Research. New York. (L)

NNS New York Psychiatric Institute. New York. See also NNNPsi.

NNStJ St. John's University Libraries. Jamaica. (L*,P) See also NBS.

NNU New York University Libraries. New York. (L*,P,M)

NNU-C —School of Commerce Library.

NNU-D —College of Dentistry Library. (L)

NNU-G —School of Business Administration. Graduate Library. (L)

NNU-H —University Heights Library.

NNU-L —School of Law Library.

NNU-M —Bellevue Medical Center Libraries. (L) (Includes Neuropsychiatric Library)

NNUT Union Theological Seminary. New York. (L*,P,M)

NNVA U.S. Veterans Administration Hospital Library. New York.

NNYI Yivo Institute for Jewish Research. New York.

NNYU Yeshiva University. New York.

NNYU-M —Albert Einstein College of Medicine. (L,P)

NNZI Zionist Archives and Library of Palestine Foundation. New York.

NPV Vassar College. Poughkeepsie. (L)

NR Rochester Public Library. (L,P,M)

NRAB American Baptist Historical Society, Samuel Colgate Baptist Historical Library. Rochester. (L*) See also DCA.

NRCR Colgate-Rochester Divinity School. Rochester. (L,P,M)

NRE Eastman Kodak Company. Rochester. (L*,P,M)

NRS St. Bernard's Seminary and College. Rochester.

NRU University of Rochester. Rochester. (L*,P,M)

North Dakota

NdFA North Dakota Agricultural College. Farko. (L)

NdU University of North Dakota. Grand Forks. (L,P)

Ohio

OAU Ohio University. Athens.

OAk Akron Public Library.

OAkU University of Akron. Akron.

OAlM Mount Union College. Alliance.

OC Public Library of Cincinnati and Hamilton County. Cincinnati. (L*,P,M)

OCA Cincinnati Art Museum. Cincinnati. (L,P)

OCAJ American Jewish Periodical Center. Cincinnati.

OCH Hebrew Union College. Cincinnati. (L,P)

OCHP Historical and Philosophical Society of Ohio. Cincinnati.

OCL Lloyd Library and Museum. Cincinnati. (L,P,M)

OCU University of Cincinnati. Cincinnati. (L,P)

OCU-M —School of Medicine Library.

OCX Xavier University. Cincinnati. (L,P)

OCan Canton Public Library.

OCl Cleveland Public Library.

OClC Cleveland Clinic Foundation. Cleveland.

OClCS Case Institute of Technology. Cleveland. (L,P)

OClL General Electric Company. Nela Park. Cleveland. (L*)

OClM Cleveland Medical Library. Cleveland. (L*,P)

OClMA Cleveland Museum of Art. C'eveland.

OClW Western Reserve University. Cleveland.

OClWHi Western Reserve Historical Society. Cleveland. (L*)

OCo Columbus Public Library.

OCoB Battelle Memorial Institute. Columbus. (L*,P,M)

ODW Ohio Wesleyan University. Delaware. (L*)

ODa Dayton Public Library and Museum and Montgomery County Library. Dayton. (P)

ODaStL St. Leonard College Library. Dayton. (L*)

ODaU University of Dayton. Dayton.

ODaWIT U.S. Air Force Institute of Technology. Library. Wright-Patterson Air Force Base. Dayton.

ODaWT U.S. Wright-Patterson Technical Library. Wright-Patterson Air Force Base. Dayton.

OFH Hayes Memorial Library. Fremont. (L,P,M)

OGK Kenyon College. Gambier. (L)

OGraD Denison University. Granville.

PE Easton Public Library. (L)

PEL Lafayette College. Easton. (L)

PEr Erie Public Library.

PGC Gettysburg College. Gettysburg. (L)

PHC Haverford College. Haverford.

PHi Historical Society of Pennsylvania. Philadelphia. (L,P) See also PPH.

PHuJ Juniata College. Huntingdon. (L)

PLF Franklin and Marshall College. Lancaster. (L,P)

PLT Lancaster Theological Seminary. Lancaster.

PLeB Bucknell University. Lewisburg. (L,P)

PMA Allegheny College. Meadville. (P)

PP Free Library of Philadelphia.

PPA American Entomological Society. Philadelphia. (L,P) (Merged into the Academy of Natural Sciences, Philadelphia) See PPAN.

PPAN Academy of Natural Sciences. Philadelphia. (L,P) See also PPA.

PPAP American Philosophical Society. Philadelphia. (L,M) See also PPAmP.

PPAmP American Philosophical Society. Philadelphia. (L,M) See also PPAP.

PPB Philadelphia Bar Association. Philadelphia.

PPC College of Physicians of Philadelphia.

PPD Drexel Institute of Technology. Philadelphia. (L*,P)

PPDr Dropsie College for Hebrew and Cognate Learning. Philadelphia. (L,P)

PPF Franklin Institute. Philadelphia. (P)

PPFA U.S. Army. Frankford Arsenal Library. Philadelphia.

PPGE-M General Electric Company. Missile and Space Vehicle Department. Aerosciences Laboratory. Philadelphia.

PPHi Historical Society of Pennsylvania. Philadelphia. (L,P) See also PHi.

PPJ Jefferson Medical College. Philadelphia.

PPL Library Company of Philadelphia.

PPLT Lutheran Theological Seminary. Krauth Memorial Library. Philadelphia.

PPP Philadelphia College of Pharmacy and Science. Philadelphia. (L*,P) See also PPPCPh.

PPPCPh Philadelphia College of Pharmacy and Science. Philadelphia. (L*,P) See also PPP.

PPPD Divinity School of the Protestant Episcopal Church. Philadelphia.

PPPL Philadelphia Board of Public Education. Pedagogical Library.

PPPM Philadelphia Museum of Art. (L)

PPPrHi Presbyterian Historical Society. Philadelphia.

PPT Temple University. Philadelphia. (L,P)

PPT-D —Dental-Pharmacy Library. See also PPT-P.

PPT-L —Law School Library.

PPT-M —Medical School Library. (L*)

PPT-P —Professional Schools. See PPT-D

PPWI Wistar Institute of Anatomy and Biology. Philadelphia. (L*)

PPi Carnegie Library of Pittsburgh. (L*,P)

PPiC Carnegie Institute of Technology. Pittsburgh. (L) See also PPiT.

PPiCI	Carnegie Institute of Technology, Pittsburgh. (L) See also PTiC.
PPiD	Duquesne University, Pittsburgh. (L*,P,M)
PPiM	Mellon Institute, Library, Pittsburgh. (L*,P)
PPiPT	Pittsburgh Theological Seminary, Pittsburgh. (Merger of Western Theological Seminary and Pittsburgh-Xenia Theological Seminary)
PPiU	University of Pittsburgh, Pittsburgh. (L)
PPiU-H	—Maurice and Laura Falk Library of the Health Professions. (Includes Schools of Medicine, Dentistry, Pharmacy, Nursing) See also PPiU-M.
PPiU-L	—Law School Library. (L)
PPiU-M	—Schools of Dentistry and Medicine Library. See PPiU-H.
PPiU-PH	—Graduate School of Public Health. (L)
PPiUS	U.S. Steel Corporation, Pittsburgh. (L*)
PR	Reading Public Library.
PRA	Albright College, Reading.
PRR	Rosemont College, Rosemont. See also PRosC.
PRosC	Rosemont College, Rosemont. See also PRR.
PSC	Swarthmore College, Swarthmore. (L)
PSC-F	—Friends Historical Library. (L*,P) See also PSC-HI.
PSC-HI	—Friends Historical Library. (L*,P) See also PSC-F.
PSC-P	—Swarthmore College Peace Collection. (L*)
PScU	University of Scranton, Scranton.
PSt	Pennsylvania State University, University Park. (L*,P,M)
PSt-A	—Agricultural Library.
PU	University of Pennsylvania, Philadelphia. (L*,P,M)
PU-L	—Biddle Law Library. (L*,P)
PU-Mu	—University Museum Library. (L*,P,M) See PU.
PV	Villanova College, Villanova. (L) See also PVC.
PV-L	—Law School Library. (L*)
PVC	Villanova University, Villanova. (L) See also PV.
PVeK	Koppers Company, Inc. Research Department. Technical Information Branch Library, Verona.
PWW	Washington and Jefferson College, Washington. (L)
PWb	Osterhout Free Library, Wilkes Barre. (L)
PWbH	Wyoming Historical and Geological Society, Wilkes Barre. (P)
PWcT	Pennsylvania State Teachers College, West Chester. (L*)

Rhode Island

R	Rhode Island State Library, Providence. (P)
RKS	University of Rhode Island, Kingston. (L) See also RU.
RP	Providence Public Library. (L*,P,M)

Texas

Tx	Texas State Library and Historical Commission, Austin. (L*,P)
TxAbH	Hardin-Simmons University, Abilene.
TxCM	Agricultural and Mechanical College of Texas, College Station. (L)
TxCM-E	—Texas Engineers Library. See TxCM.
TxCaW	West Texas State College, Canyon. (L*)
TxD	Texas State College for Women, Denton. (L,P) See also TxDW.
TxDN	North Texas State College, Denton. (L)
TxDW	Texas State College for Women, Denton. (L,P) See also TxD.
TxDa	Dallas Public Library.
TxDaM	Southern Methodist University, Dallas. (L,P,M)
TxDaS	Southwestern Medical College, Dallas.
TxDaTS	Dallas Theological Seminary Library, Dallas. (L,P)
TxEM	Texas Western College, El Paso. (L,M) See also TxETW.
TxETW	Texas Western College, El Paso. (L,M) See also TxEM.
TxFS	Southwestern Baptist Theological Seminary, Fort Worth. See also TxSS.
TxFTC	Texas Christian University, Fort Worth.
TxGr	Rosenberg Library, Galveston. (L,P)
TxH	Houston Public Library. (L*)
TxHMC	Texas Medical Center Library, Houston. (L)
TxHR	Rice Institute, Houston. (L)
TxHU	University of Houston, Houston.
TxHuT	Sam Houston State Teachers College, Huntsville.
TxKT	Texas College of Arts and Industries Library, Kingsville. (L*)
TxLT	Texas Technological College, Lubbock. (L*,P,M)
TxNacS	Stephen F. Austin College, Nacogdoches.
TxSS	Southwestern Baptist Theological Seminary, Fort Worth. See also TxFS.
TxSa	San Antonio Public Library.
TxSaT	Trinity University, San Antonio. (L)
TxSvT	Tarleton State College, Stephenville.
TxU	University of Texas, Austin. (L,P,M)
TxU-D	—School of Dentistry, Houston. (L)
TxU-M	—Medical School, Galveston.
TxWB	Baylor University, Waco. (L,P,M)

Utah

UBcT	Thiokol Chemical Corporation (Utah Division), Brigham City.
ULA	Utah State Agricultural University, Logan. (L,P)
UPB	Brigham Young University, Provo. (L,M)
US	Free Library of Salt Lake City. (L*) See also USl.
USl	Free Library of Salt Lake City. (L*) See also US.
UU	University of Utah, Salt Lake City. (L)

Washington

Wa	Washington State Library, Olympia. (L,P)
WaBeN	Western Washington College of Education, Bellingham.
WaPS	Washington State University, Pullman.
WaPlP	Pacific Lutheran University, Parkland.
WaS	Seattle Public Library. (L*,P,M)
WaSK	King County Medical Society, Seattle. (L)
WaSp	Spokane Public Library. (L)
WaSpG	Gonzaga University, Spokane.
WaT	Tacoma Public Library. (L*)
WaU	University of Washington, Seattle. (L*,P,M)
WaU-L	—Law Library.
WaWW	Whitman College, Walla Walla. (L)

West Virginia

WvHuM	Marshall University, Morrow Library, Huntington.
WvU	West Virginia University, Morgantown. (L,P)
WvU-M	—Medical Center Library. (L,P)

Wisconsin

WAL	Lawrence College, Appleton. (L,M)
WAP	Institute of Paper Chemistry, Appleton. (P)
WBB	Beloit College, Beloit. (L)
WHi	State Historical Society of Wisconsin, Madison.
WM	Milwaukee Public Library. (L*,P,M)
WMM	Marquette University, Milwaukee. (L)
WMaF	U.S. Department of Agriculture, Forest Products Laboratory, Madison. (L*)
WNa	Nashotah House, Nashotah.
WU	University of Wisconsin, Madison. (L,P,M.)

Wyoming

Wy	Wyoming State Library, Cheyenne. (L,P)
WyU	Wyoming University, Laramie. (L,P,M)

Canada

1. Former Symbols.

CaB	University of British Columbia, Vancouver. (L,P,M) See also CaBVaU.

RPB Brown University, Providence. (L,P,M)
RU University of Rhode Island, Kingston. (L) See also RKS.

South Carolina

ScCM Medical College of the State of South Carolina, Charleston. (L)
ScCc Clemson Agricultural College, Clemson. (L) See also ScCleA.
ScCleA Clemson Agricultural College, Clemson. (L) See also ScCc.
ScClP Presbyterian College, Clinton. (L)
ScG Greenville Public Library.
ScU University of South Carolina, Columbia. (L,P,M)

South Dakota

SdB South Dakota State College, Brookings. (L,P)
SdRM South Dakota School of Mines and Technology, Rapid City. (L*,P)
SdU State University of South Dakota, Vermillion. (L*)

Tennessee

T Tennessee State Library, Nashville. (L*,P,M)
TC Chattanooga Public Library. (L*,P)
TCU University of Chattanooga, Chattanooga. (L)
TJoS East Tennessee State College, Johnson City.
TKL Knoxville Public Library System. (Formerly Lawson McGhee Public Library) (P)
TMC Cossitt Reference Library, Memphis. (L)
TMG Goodwyn Institute, Memphis. (L,P)
TN Nashville Public Library. (L,P)
TNF Fisk University, Nashville.
TNF-M —Meharry Medical College, Nashville. (L) See also TNM.
TNG George Peabody College for Teachers, Nashville. (L,P,M) See also TNJ-P.
TNJ Joint University Libraries (Vanderbilt University, George Peabody College for Teachers and Scarritt College), Nashville. (L,P,M)
TNJ-M —Vanderbilt School of Medicine and Nursing. (L*,P) See also TNV-M.
TNJ-P —George Peabody College for Teachers. (L,P,M) See also TNG.
TNJ-R —Vanderbilt School of Religion. (L*,M)
TNM Meharry Medical College, Nashville. (L) See also TNF-M.
TNV Vanderbilt University, Nashville. (L,P,M) See TNJ.
TNV-M —School of Medicine and Nursing (L*,P) See also TNJ-M.
TONS Oakridge Institute of Nuclear Studies, Oak Ridge. (L)
TSewU-T University of the South, School of Theology, Sewanee.
TU University of Tennessee, Knoxville. (L)
TU-M —Colleges of Medicine, Dentistry and Pharmacy, Memphis. (P)

Vermont

Vt Vermont State Library, Montpelier. (L)
VtMM Middlebury College, Middlebury. (L) See also VtMiM.
VtMiM Middlebury College, Middlebury. (L) See also VtMM.
VtNN Norwich University, Northfield. (L)
VtU University of Vermont and State Agricultural College, Burlington. (L,P)
VtU-Med —College of Medicine Library.

Virginia

V Virginia State Library, Richmond. (L,P,M) See also Vi.
VBP Virginia Polytechnic Institute, Blacksburg. (L*,P,M) See also ViBlbV.
VHS Hampden-Sydney College, Hampden-Sydney. (L) See also ViHdsC.
VHal Hampton Institute, Hampton. (L) See also ViHal.
VLR Randolph-Macon Woman's College, Lynchburg. (L) See also ViLRM.
VLxW Washington and Lee University, Lexington. (L) See also ViLxW.
VNM Mariners' Museum, Newport News. (P) See also ViNeM.
VR Richmond Public Library. (L*) See also ViR.
VRM Medical College of Virginia, Richmond. See also ViRM.
VRT Union Theological Seminary Library, Richmond. See also ViRUT.
VRU University of Richmond, Richmond. (L) See also ViRU.
VU University of Virginia, Charlottesville. (L*,P,M) See also ViU.
VW College of William and Mary, Williamsburg. See also ViW.
Vi Virginia State Library, Richmond. (L,P,M) See also V.
ViBlbV Virginia Polytechnic Institute, Blacksburg. (L*,P,M) See also VBP.
ViHal Hampton Institute, Hampton. (L) See also VHal.
ViHdsC Hampden-Sydney College, Hampden-Sydney. (L) See also VHS.
ViLRM Randolph-Macon Woman's College, Lynchburg. (L) See also VLR.
ViLxW Washington and Lee University, Lexington. (L) See also VLxW.
ViN Norfolk Public Library.
ViNeM Mariners' Museum, Newport News. (P) See also VNM.
ViR Richmond Public Library. (L*) See also VR.
ViRM Medical College of Virginia, Richmond. See also VRM.
ViRU University of Richmond, Richmond. (L) See also VRU.
ViRUT Union Theological Seminary, Richmond. See also VRT.
ViSwC Sweet Briar College, Sweet Briar.
ViU University of Virginia, Charlottesville. (L*,P,M) See also VU.
ViW College of William and Mary, Williamsburg. See also VW.

CaEU University of Alberta, Edmonton. See also CaAEU.
CaH Hamilton Public Library. (L) See also CaOH.
CaHaD Dalhousie University, Halifax. (L) See also CaNSHD.
CaHaD-M —Medical and Dental Libraries. See also CaNSHDM.
CaHaN Nova Scotia Research Foundation, Halifax. (L,P) See also CaNSHR.
CaK Queen's University, Kingston. (L,P) See also CaOKQ.
CaL University of Western Ontario, London. (L,P) See also CaOLU.
CaLI Institut Agricole d'Oka, La Trappe. (L)
CaLP London Public Library. (L)
CaM McGill University, Montreal. (L*,M) See also CaQMM.
CaM-M —Medical Library. See also CaQMMM.
CaME Engineering Institute of Canada, Montreal. See also CaQME.
CaMI Insurance Institute of Montreal, Montreal. (L)
CaMR Royal Bank of Canada, Montreal. (L,P) See also CaQMR.
CaMS Sun Life Assurance Company of Canada, Montreal. (L)
CaO Library of Parliament, Ottawa. See also CaOOP.
CaOA Canada, Department of Agriculture, Main Library, Ottawa. (L*,P,M) See also CaOOAg.
CaOG Canada, Geological Survey and National Museum, Ottawa. (L*,P)
CaON National Research Council, Ottawa. (L,P,M) See also CaOON
CaOS Canada, Bureau of Statistics, Ottawa. (L) See also CaOOS.
CaOU University of Ottawa, Ottawa. See also CaOOU.
CaSU University of Saskatchewan, Saskatoon. (L) See also CaSSU.
CaT Toronto Public Library, Metropolitan Bibliographic Centre. (L*,M) See also CaOTP.
CaTA Academy of Medicine, Toronto. (L,P) See also CaOTA.
CaTM Canada, Department of Transport, Air Services, Meteorological Branch Library, Toronto. (L,P)
CaTR Royal Canadian Institute, Toronto. (Collection included with University of Toronto) See CaOTU.
CaTU University of Toronto, Toronto. See also CaOTU.
CaV Vancouver Public Library. (L*,P) See also CaBVa.
CaVlP British Columbia, Provincial Library, Victoria. (L,P) See also CaBViP.
CaW Winnipeg Public Library. See also CaMW.
CaWU University of Manitoba, Winnipeg (L*) See also CaMWU.

2. New Symbols.

Alberta

CaAEU University of Alberta, Edmonton. See also CaEU.

COOPERATING LIBRARIES—*Continued*

Canada—*Continued*

British Columbia

CaBVa Vancouver Public Library. (L*,P) See also CAV.
CaBVaU University of British Columbia, Vancouver. (L,P,M) See also CaB.
CaBViP British Columbia. Provincial Library, Victoria. (L,P) See also CaViP.

Manitoba

CaMW Winnipeg Public Library. See also CaW.
CaMWM Manitoba Medical College, Winnipeg. (L*,P,M)
CaMWU University of Manitoba, Winnipeg. (L*) See also CaWU.

New Brunswick

CaNBFU University of New Brunswick, Fredericton. (L)
CaNBSaM Mount Allison University, Sackville.

Newfoundland

CaNfSM Memorial University College, St. John's.

Nova Scotia

CaNSHD Dalhousie University, Halifax. (L) See also CaHad.
CaNSHDM —Medical and Dental Libraries. See also CaHad-M.
CaNSHPL Nova Scotia. Provincial Library, Halifax. (Includes holdings of National Research Council, Atlantic Regional Laboratory, Halifax)
CaNSHR Nova Scotia Research Foundation, Halifax. (L,P) See also CaHaN.
CaNSHT Nova Scotia Technical College, Halifax.

Ontario

CaOGA Ontario Agricultural College, Guelph.
CaOH Hamilton Public Library. (L) See also CaH.
CaOHM McMaster University, Hamilton. (L)
CaOKF National Defence College, Fort Frontenac Library, Kingston.
CaOKQ Queen's University, Kingston. (L,P) See also CaK.
CaOLU University of Western Ontario, London. (L,P) See also CaL.
CaOLUM —Medical Library.
CaOOAg Canada. Department of Agriculture. Main Library, Ottawa. (L*,P,M) See also CaOA.
CaOOAgB—Plant Research Institute. Reference Library.
CaOOAgE—Entomology Division. Reference Library, Ottawa.
CaOOB Bank of Canada, Library, Ottawa.
CaOOCC Carleton College, Ottawa. (L)
CaOOGB Canada. Department of Mines and Technical Surveys. Geographical Branch, Ottawa. (L*)
CaOOL Canada. Department of Labour, Ottawa. (L,P)
CaOON National Research Council, Ottawa. (L*,P,M) See also CaON.
CaOOND Canada. Department of National Defence. Departmental Reference Library, Ottawa.
CaOONL National Library of Canada, Ottawa. (L*)
CaOONM Canada. National Museum, Ottawa. (L,P)
CaOOP Library of Parliament, Ottawa. See also CaO.
CaOOS Canada. Bureau of Statistics, Ottawa. (L) See also CaOS.
CaOOSC Canada. Supreme Court, Ottawa.
CaOOU University of Ottawa, Ottawa. See also CaOU.
CaOTA Academy of Medicine, Toronto. (L,P) See also CaTA.
CaOTDR Canada. Defence Research Board. Defence Research Medical Laboratory, Toronto.
CaOTP Toronto Public Library. Metropolitan Bibliographic Centre. (L*,M) See also CaT.
CaOTRF Ontario Research Foundation, Toronto. (L)
CaOTRM Royal Ontario Museum, Zoology and Palaeontology Library, Toronto.
CaOTTC Trinity College, Toronto.
CaOTU University of Toronto, Toronto. (Includes holdings of Royal Canadian Institute, Toronto) See also CaTU, CaTR.
CaOTV Victoria University, Toronto.

Quebec

CaQMAI Arctic Institute of North America, Montreal. (L,P,M)
CaQME Engineering Institute of Canada, Montreal. See also CaMI.
CaQMEP Ecole Polytechnique, Montreal.
CaQMM McGill University, Montreal. (L*,M) See also CaM.
CaQMMM—Medical Library.
CaQMP Pulp and Paper Research Institute of Canada, Montreal. (L*,P)
CaQMR Royal Bank of Canada, Montreal. (L,P) See also CaMR.
CaQMU University of Montreal, Montreal.
CaQQLaS Université Laval, Faculté des Sciences, Bibliothèque, Quebec. (L*)
CaQStJ Collège Militaire de St-Jean, St. Jean.

Saskatchewan

CaSRL Legislative Library of Saskatchewan, Regina.
CaSSU University of Saskatchewan, Saskatoon. (L) See also CaSU.
CaSSUM —Medical Library.

NUMBER OF COOPERATING LIBRARIES

2nd Edition and Supplements and 3rd Edition by State

	2nd Edition	3rd Edition		2nd Edition	3rd Edition
Alabama	7	9	Nebraska	4	5
Arizona	2	4	Nevada	2	2
Arkansas	2	2	New Hampshire	4	4
California	30	72	New Jersey	10	14
Colorado	16	19	New Mexico	2	3
Connecticut	25	28	New York	80	98
Delaware	3	4	North Carolina	8	19
Dist. of Columbia	45	52	North Dakota	1	2
Florida	8	13	Ohio	28	45
Georgia	13	18	Oklahoma	6	7
Hawaii	2	3	Oregon	6	11
Idaho	3	3	Pennsylvania	60	71
Illinois	36	44	Rhode Island	4	4
Indiana	23	28	South Carolina	5	5
Iowa	10	10	South Dakota	3	3
Kansas	9	14	Tennessee	15	18
Kentucky	11	14	Texas	18	30
Louisiana	11	13	Utah	4	5
Maine	8	8	Vermont	4	5
Maryland	13	14	Virginia	13	15
Massachusetts	47	60	Washington	7	12
Michigan	18	22	West Virginia	1	3
Minnesota	17	18	Wisconsin	8	9
Mississippi	4	5	Wyoming	2	2
Missouri	19	19	Canada	32	65
Montana	3	3	TOTAL	712	956

EXPLANATIONS

A. SPECIAL CHARACTERISTICS OF THE THIRD EDITION.

1. **Changes in entry and holding information.** Since entries in the second edition and the two supplements were not reissued in a checking edition, these entries stand in the third edition without change except in those instances where reports of bibliographical changes in titles were investigated and additional locations supplied. Entries and holdings were not updated otherwise. Additional locations were added within the limitations on holdings indicated by the policy decision of the Joint Committee. Numbers following a library symbol, therefore, show its holdings as of the second edition, the first or second supplement, or in the case of new titles, as of November 1, 1960.

2. **Filing and orthographical changes.** The filing arrangement of entries follows that of the second edition except in a few cases involving the arrangement of subordinate units of names or corporate bodies where minor variations in spelling have resulted from later changes in orthography and/or transliteration systems. These latter have been ignored and the new entries interfiled with the old. For example, institutes of the *Akademiiâ nauk U.R.S.R., Kiev* formerly transliterated as Institut, but now Instytut, are interfiled. Similarly commissions—formerly Komisya (now Komisja)—are interfiled when they occur as subdivisions under a larger body such as under *Polska akademia umiejętności, Krakow.*

3. **Ligatures.** Ligatures have been omitted from new entries in the Cyrillic alphabet.

4. **Capitalization.** Capitalization of entries in the second edition and in its supplements followed varying practices and these variations have been retained in the third edition. New entries follow the practice of the second edition.

5. **Corporate names.** In new or revised entries for corporate names, the names of subordinate divisions are entered directly under the corporate body with intervening administrative units omitted except when required for identification.

6. **Cross references.** Where a bibliographical change was made in either of the supplements a new reference was made from the immediately preceding entry only. References made from any earlier variation of the entry were not revised for the supplements. These references remain unrevised in the third edition unless a new change in the entry was reported. In the latter case all cross references were completely revised.

7. **Spacing.** The aperture expansion of the camera lens for "abstracting" purposes can vary from a minimum space of a single line to a maximum space of three and one quarter inches with a blank space appearing after each exposure. Consequently, blank spaces will appear under varying circumstances involving the same entry, the parts of which have been "abstracted" from different columns and camera interfiled into a single arrangement.

Blank spaces which occur in the bibliographical part of an entry when more than one exposure of the camera has been required for its assembly do not indicate omission of information. This assembly of a single entry from two or more sources sometimes leads to the variance indicated in Order of Notes (below).

8. Order of notes. The construction of new entries by "abstracting" the bibliographical parts from entries in the second edition and the two supplements has resulted in some instances in non-uniform sequence of bibliographical notes and terms.

9. Order of holdings. The order of holdings in the third edition is (1) symbols and holdings from the second edition; (2) symbols and holdings from first supplement; (3) symbols and holdings from second supplement; (4) symbols and holdings representing new and additional locations. Holdings are therefore not given in a single alphabetical symbol sequence as in the second edition. A blank space separates each new arrangement usually in the order above. But it should be noted that in entries involving a long list of holdings, this blank space indicates that more than one camera exposure was required.

Exceptions to this arrangement occur when symbols and holdings from one or both of the supplements or new locations were not too numerous and were transferred in manuscript to the listing in the second edition; and vice versa in the transferring of holdings in the second edition to a corrected form of entry appearing in one of the supplements.

10. Deletions of holdings. Deletions of library holdings have been erased or lined out in all cases reported. It should be noted therefore that a blank space in a list of holdings indicates that a deletion has been made.

11. Asterisk (*) after a library symbol. An asterisk (*) after a library symbol indicates that the holding was taken from the entry record for the title in the National Union Catalog and no effort was made to determine the extent of the library's holdings for the title.

12. Obsolete symbols. The following symbols used in the first and second supplements were not deleted for technical and other reasons.

- * preceding a title in the first supplement to indicate that it was new to the second edition
- ‡ change of title
- ⊗ main volume
- ⊙ first supplement
- ▲ holdings are not to be recorded

B. GENERAL CHARACTERISTICS OF THE SECOND EDITION CONTINUED IN THE THIRD EDITION.

1. A serial not published by a society or a public office is entered under the first word, not an article, of the title.

2. A serial published by a society, but having a distinctive title, is entered under the title with reference from the name of the society

3. Learned societies and academies of Europe, other than English, with names beginning with an adjective denoting royal privilege are entered under the first word following the adjective. These adjectives, Kaiserlich, Königlich, Reale, Imperiale, etc., are abbreviated to K., R., I., etc., and are disregarded in the arrangement.

4. Colleges and universities having a geographical designation are entered under the name of the city, state or country contained in the title.

EXPLANATIONS *Continued*

5. Observatories, botanical and zoological gardens, etc., not having a distinctive name, are entered under the name of the place in which they are located, unless affiliated with a university, in which case they are entered under the name of the university.

6. References have been made from earlier forms of a title and/or name of issuing body to latest form known, and in general whenever a reference might facilitate the use of the list. (N.B. See Note 6, Cross References in A above.)

7. Volume numbers and dates are inclusive in all cases and the dates are for the period covered by the serial, not those of publication.

8. A library's symbol is made up of a combination of letters for state, city and library. A symbol alone indicates the library holds the complete set.

9. A hyphen (-) between volume numbers or dates signifies "from and including the former to and including the latter."

10. A plus sign (+) indicates that the serial is currently received and that the set is complete from the last date or volume number given.

11. Parallels (||) indicate that publication ceased with the preceding date or volume.

12. Brackets ([]) indicate that the volumes or years so enclosed are not complete.

ABREVIATIONS AND SYMBOLS

+	currently received	ⓜ	Main volume (used in second supplement)	Ja	January
‡	holdings are not recorded (used in second supplement)	mc	microcard	F	February
[ ]	incomplete	mf	microfilm	Mr	March
‡	change of title (used in the first and second supplements)	nd	no date	Ap	April
‖	closed entry	no	number	My	May
ⓢ	first supplement (used in second supplement)	np	no place	Je	June
?	incomplete or uncertain	ns	new series	Jl	July
•	(before title) symbol used in first supplement to indicate new title	os	old series	Ag	August
•	(after library symbol) location taken from entry record in the National Union Catalog (used in third edition)	pc	photostat copy	S	September
fc	film copy	pt	part	O	October
		s	series	N	November
		v	volume	D	December
		vp	various places		
		yr	year		

UNION LIST OF SERIALS

IN LIBRARIES OF

THE UNITED STATES AND CANADA

THIRD EDITION

S5

VOLUME 1

A-B

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UNION LIST OF SERIALS

IN LIBRARIES OF

THE UNITED STATES AND CANADA

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THIRD EDITION

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EDNA BROWN TITUS

Under the Sponsorship of the Joint Committee
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VOLUME 1

A-B

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1965

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ON THE UNION LIST OF SERIALS*

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* at the close of editorial work on the Third Edition

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PREFACE

The history of the *Union List of Serials* covers half a century from its beginnings before World War I to the publication of this third edition. In describing the first edition, which appeared in 1927, one librarian wrote that it seemed obvious to him that such a list ought to have been compiled early in American library history. The first edition was, as a matter of fact, preceded by a number of lists, both in this country and abroad, of more limited coverage. In a bibliography of union lists of serials by Daniel C. Haskell, appended to the first edition, the earliest entry is for a list, published in 1859, of serials in the libraries of Milan. The earliest list for the United States covers the titles in eight Baltimore libraries in 1876. The first list covering an extended territory is an enumeration of periodicals in Belgian libraries, with a record of holdings, published in 1881. Bolton's *Catalogue of Scientific and Technical Periodicals* (Washington, 1885) shows the extent of files of 5,100 periodicals in 125 libraries, but does not give exact statements of holdings.

The Chicago Library Club's list of serials in Chicago libraries seems to have been the first American attempt at an extensive list of holdings of serial sets. It was issued in 1901 and was expanded in 1906 by the John Crerar Library to cover 12,000 serial titles located in Chicago and its immediate vicinity. In the years preceding World War I a number of other local lists were published which cover the holdings of the libraries of individual cities and universities.

In 1913 the American Library Association appointed a Committee on a Union List of Serials. This action was in response to a letter from E. C. Richardson, then librarian of Princeton University, in which he advocated the preparation of a union list of periodicals in the principal libraries of the United States and Canada and asked whether the A.L.A. would assist in such a project.

In 1915 the University of Nebraska prepared a list of the serials in its various libraries. This list was extended in 1916 to include thirteen libraries in other cities of Nebraska, and the H. W. Wilson Company was invited to estimate the cost of printing the list in an edition of 500 copies. At the midwinter meeting of A.L.A. that year the librarians of the universities of Illinois, Minnesota, and Wisconsin suggested that the list be expanded to include their collections. Clement W. Andrews, librarian of the John Crerar Library and chairman of the Committee on a Union List of Serials, urged the inclusion of all the principal libraries of the North-Central region and accepted the chairmanship of a working group which made some progress toward editing the material that was gathered.

World War I interrupted the progress of the venture; but when the problem was attacked anew after the war, it had become obvious to all concerned that a single national list would be infinitely more useful than numerous regional lists. At the midwinter meeting of the A.L.A. in December 1921, H. W. Wilson presented a plan for a national list which had been carefully worked out in conformity with the opinions and preferences expressed by more than forty large libraries in their replies to a questionnaire. These libraries had also checked an experimental four-page sample of a proposed checking edition. The plan was accepted; and, at H. W. Wilson's request, the meeting approved the appointment of a committee to act with the Wilson Company in working out a practicable plan of publication and to serve in an advisory capacity during the course of publication. In the following year the original exploratory committee was discharged, at its request, and a new Advisory Committee on the Union List of Serials was appointed, under the chairmanship of H. M. Lydenberg of the New York Public Library. The scope of the project was expanded to include Canadian libraries, and the proposed publication was entitled *Union List of Serials in Libraries of the United States and Canada.*

The new committee decided to finance the project through advance subscriptions. The plan called for forty libraries or groups of libraries to pledge $300 each for a total of three years in order to provide the estimated cost of $36,000 for editing and printing. In return for a subscription, each institution was to receive eighteen copies of the completed list valued at $50 each. A circular was sent out in December 1922, and by the end of 1923 forty-one libraries had pledged their support. In addition to the funds secured from subscriptions, the sum of $10,000 was obtained in 1923 through a public-spirited grant from the Laura Spelman Rockefeller Memorial, which provided for the expense of checking holdings in U.S. Government libraries. With these funds in hand, an editorial office was established at the H. W. Wilson Company in New York. Winifred Gregory was appointed editor, and the work began.

The basic list was compiled on cards; and it incorporated entries found in the catalogs of the Library of Congress and the New York Public Library, in previous union lists, in specialized subject lists, and in bibliographies of periodicals. The original estimate of costs had been based on the expectation that the list would contain approximately 40,000 entries. As the work progressed, it became obvious that nearly double the number of entries originally estimated would have to be included, and it was found necessary to increase the price of each copy from $50 to $75 and to ask the forty-one libraries to purchase additional copies, if possible. Financial limitations also made it necessary to exclude certain

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groups of materials. Among these were government publications, annuals, administrative reports, almanacs, American newspapers, English and other foreign newspapers published after 1820, law reports and digests, and publications of experiment stations, of local and state religious, labor, and fraternal organizations, of boards of trade, and of chambers of commerce, as well as house organs and publications of alumni, undergraduate, and intercollegiate fraternal organizations.

It had been determined that a preliminary or checking edition would be issued, made up of titles which it was reasonably certain would be found in American libraries. This checking edition was issued in twenty parts between March 1924 and December 1926. The parts were sent to cooperating libraries with the request that they be returned to the editor at specified intervals, with records of holdings for the titles listed and for any titles that had been omitted. From the reports thus submitted, there was issued between December 1924 and September 1926 a series of eleven provisional sections. These sections were revised by the cooperating libraries, and from them the editorial staff compiled the list. It was hoped in the beginning that the entire project could be completed in three years, but an additional year was required. The *Union List* was published in 1927—an imposing volume of 1,580 pages containing entries for 75,000 serial titles and locating holdings in 225 libraries. It was rightly hailed as the most notable bibliography ever sponsored by American libraries, as an amazing accomplishment, and as a forward step comparable in importance to the decision to distribute Library of Congress printed cards.

But, as is inevitable with any massive compilation of its kind, the *Union List of Serials* was out of date before it was published. The *Union List* did not include any serials which began publication after 1924, nor did it note changes of titles occurring after that date. The need for a supplement was soon apparent, and during the summer of 1929 the Advisory Committee laid the groundwork for one. Fortunately, the first edition was a financial success: by the middle of 1930 a surplus of $10,000 had been accumulated. When offered either a cash refund or a supplementary volume, all the forty-one original subscribers chose the latter.

Ultimately, two supplements to the first edition were published, both under the editorship of Gabrielle E. Malikoff. The first supplement covered the period January 1925-June 1931, contained 660 pages, and appeared in 1931. The second supplement, for the period July 1931-December 1932, contained 331 pages and was published in 1933. The device of a preliminary or checking edition was again employed in compiling the supplements; but the majority of cooperating libraries submitted changes and additions on cards or slips. The number of locations was somewhat increased, and Georgia, Hawaii, Kentucky, South Carolina, and Utah were represented for the first time.

After some discussion as to the advisability of a further, cumulative supplement, H. W. Wilson proposed to the A.L.A. in November 1936 that a second edition be prepared to revise and correct earlier entries, to add new titles, to include several categories omitted from the first edition, to bring holdings up to date, and to record the resources of libraries not previously represented. He also suggested the appointment of a new advisory committee to consider the preparation and publication of the second edition. Mr. Wilson's proposals were accepted; and the Executive Board of the A.L.A. appointed, in April 1937, a committee which served from that date until 1948 under the successive chairmanships of James Thayer Gerould, Donald B. Gilchrist, Wyllis E. Wright, and Helmer L. Webb.

In the midst of the depression there seemed little hope that the second edition could be financed, as had been the first, by a group of subscribing libraries. An appeal was therefore directed by the committee to the Rockefeller Foundation, which generously granted the sum of $46,100 toward the editorial expenses of preparing the new list. The editorship was again placed in the capable hands of Winifred Gregory; and an editorial office was established in the Library of Congress, because of the concentration of bibliographical information there and because the Library of Congress had kept a record of changes in its serial holdings.

The second edition of the *Union List of Serials* followed closely the pattern of the first. A preliminary or checking edition was compiled from the revised and corrected entries in the first edition and its supplements, together with titles submitted by libraries which had kept a record of their serial accessions since the publication of the second supplement. This preliminary edition, listing approximately 106,000 titles, was issued in nine parts between May 1939 and October 1940. It was checked and returned by the cooperating libraries, together with reports of an additional 28,000 titles, of which 9,000 were included in the second edition. The closing date for new titles was December 31, 1940. Exhaustion of the Rockefeller Foundation subvention made it impossible to issue a supplementary checking edition.

The scope of the list remained largely unchanged, but to the categories included in the first edition there were added annual publications recording or summarizing the progress of research in various fields, as well as numbered monographic series, children's magazines, and certain "pulp" magazines. The number of libraries represented was greatly enlarged, with particular attention to libraries in the South and in the Mountain states, both of which areas had been inadequately represented in the first edition.

The second edition was published in 1943 in a volume of 3,065 pages containing entries for 115,000 titles and locating holdings in 650 libraries. Like its predecessor, it was acclaimed as the most important and comprehensive of union lists and as indispensable in any American library doing reference work with periodicals.

PREFACE — *Continued*

Before the volume was off the press, work had started on a supplement covering the period from January 1941 to December 1943. It was planned as the first of a series of supplements which would preserve the usefulness of the main volume and provide for speedier publication of information on new titles and important changes in holdings. A checking edition was issued in May 1944. The supplement itself, edited by Gabrielle E. Malikoff and containing 1,123 pages, was published in 1945. This supplement included, in addition to the categories covered in earlier issuances of the *Union List*, a number of government serials, titles from the New York Public Library's collection of dime novels, and a group of German almanac titles in the Harvard University Library. Holdings were brought up to date, and fifteen libraries were represented for the first time.

Plans were then made for the preparation of a second supplement to the second edition, which would cover the period 1944-1947. But conditions created by World War II interfered, and the first part of the checking edition did not appear until the middle of 1949. In the meantime, as a result of the Conference on International Cultural, Educational and Scientific Exchanges held at Princeton in 1946, a Joint Committee, which eventually came to represent thirteen library associations and other organizations, was appointed, under the chairmanship of Wyllis E. Wright, to plan for the future of the *Union List of Serials*. In 1948 it took over from the A.L.A. Advisory Committee the supervision of the second supplement, which, consisting largely of new titles and covering the period January 1944-December 1949, was published in 1,365 pages, in 1953, under the editorship of Marga Franck. The preface announced that, because of altered circumstances, this was the last supplement which would be issued.

The major factor in the circumstances referred to was the initiation by the Library of Congress in 1951 of *Serial Titles Newly Received*. At first confined to the acquisitions of the Library of Congress, this monthly publication had begun the listing of all serials which commenced publication on or after January 1, 1950. In 1953, with the support and cooperation of the Joint Committee on the Union List of Serials, it was expanded to include the acquisitions of other libraries and was renamed *New Serial Titles*; thus it became, in effect, a current supplement to the *Union List of Serials*. This change in scope was discussed with and approved by the H. W. Wilson Company, which stated that it planned no further editions of its own.

It had also been proposed that there be established in the Library of Congress a permanent and self-sustaining union list or union catalog of serials on punched cards. In 1956 the Rockefeller Foundation made a grant of $6,000 to the Joint Committee to support a study of this proposal. Wyllis E. Wright, who had in 1954 been succeeded as chairman of the Joint Committee by Andrew D. Osborn, conducted the study. A comprehensive report, with detailed recommendations, was issued in 1957 under the title *A Permanent Program for the Union List of Serials*. Unfortunately, financing the project on the scale required proved to be impossible.

In 1957 the Joint Committee on the Union List of Serials was incorporated as a non-profit organization, and in 1958 Frank B. Rogers became its chairman. It was then decided to explore the possibility of publishing a third edition. A plan was drawn up for reprinting in one alphabet without general revision the entries in the second edition and its supplements, making major additions and changes in holdings of titles as reported by cooperating libraries, adding a selected number of new titles which began publication before January 1, 1950, and which were within the scope of the second edition, and issuing a checking edition consisting of only the selected new titles. The Council on Library Resources, Inc., was approached, and it was proposed that operational and administrative responsibility for a third edition of the *Union List of Serials* be assumed by the Library of Congress, with the Joint Committee retaining its role of policy guidance. The Librarian of Congress, L. Quincy Mumford, signified the Library's willingness to undertake this task; and, in 1959, the Council made available the sum of $244,651 for the execution of the project. In announcing the grant, Verner W. Clapp, President of the Council on Library Resources, Inc., expressed the hope that, as the work progressed, improved techniques would become available and would be utilized.

Work began in September 1959 with the establishment of an editorial office in the Library of Congress and with the appointment of Edna Brown Titus as editor. The preparation of the checking edition involved withdrawing, examining, and searching all the serial entries in the National Union Catalog, except serial entries under official headings. Entries were also selected from the *Southeastern Supplement to the Union List of Serials, Serial Titles Newly Received*, from reports of pre-1950 imprints previously sent to *New Serial Titles*, and from reports made directly to the editorial office. The checking edition was distributed in four parts between June 1960 and April 1961; the final part was checked and returned in July 1961. This phase of the project added 11,846 new titles to the third edition. The making of bibliographical changes was completed in November 1961.

After investigating several alternative methods of final copy preparation, the Committee decided in July 1961 to take advantage of the new "abstracting" method of photographic reproduction developed by the British firm of Balding & Mansell. This method had been successfully employed in the publication of the British Museum's *General Catalogue of Printed Books*. Its use, it is estimated, saved $100,000 in editorial preparatory costs, an expense which would otherwise have had to be borne by the libraries purchasing the third edition. Following this decision, preparation of copy for the printer began in October 1961. In 1961, also, the joint Committee asked the H. W. Wilson Company (which had published the first and second editions) to undertake publication and distribution of the third edition on its behalf; specifying manufacture by Balding & Mansell for the reasons mentioned.

The need to incorporate entries for new serials in Far Eastern languages was given serious consideration and study. Mr. Raymond Nunn, representing the Committee on Library Resources of the Association for Asian Studies, was present at the June 25, 1959 meeting of the Committee and reported fully on the research needs for their control, and also on the current status of processing control of serial entries in these languages in American libraries. He estimated that about 13,000 titles would be involved. It was recognized that the adding of these titles would require substantial additional funds for the purpose. To this end, Mr. Nunn reported that his Association was now attempting to secure foundation or government support. The Committee was fully agreed on the importance of the addition of these titles to the third edition and was willing to accept funds for the purpose. It was with regret that Dr. Rogers reported at the January 27, 1960 meeting of the Committee that new entries for Far Eastern serials would not be included in the third edition. This decision was only reached after a thorough study of all the problems involved. In the main, the principal reason for the decision was the current lack of adequate cataloging control of such titles in American libraries. This lack of adequate control would require recataloging of most of the titles before incorporation in the *Union List of Serials*. In any event, it had also proved impossible to secure the necessary funds for the project. Dr. Rogers reported that a small sum of money had been secured by the Library of Congress to provide for the filming of presently cataloged serial entries in libraries having Oriental collections. From these records, it was planned to organize a union card catalog of Far Eastern serials. Another objective would be to prepare a realistic estimate of the cost in order to secure necessary funds for the compilation and publication of a separate union list for Far Eastern serials at a later date.

In preparing copy, the editor and her staff worked with large 20" x 29" boards. The 8,091 boards were kept on 675 custom-made sliding trays, 12 boards to each tray. The trays and the cabinets to hold them were so designed as to permit easy access to all the boards at any time. Each board was divided into columns. In column 1 was mounted a column cut from the second edition and in columns 2 and 3, columns from the first and second supplements. Columns 4, 5, and 6 were used for new titles, bibliographical changes, and new cross references which fell within the alphabetical span of column 1. Columns 7 and 8 were used for transferred locations and holdings, additional locations, and other miscellaneous changes.

With the completion of the mounting process, it was necessary to number each entry in such a way that the camera operator could proceed from numbered entry to numbered entry, in order that the camera might pick up titles in their alphabetical sequence and holdings under the correct titles. All this involved a tremendous amount of detail. Limitations under which the editor worked were many: sequential numbers had to be added on the right-hand side of the entry and between 2 9/16" and 2 5/16" from the first bold letter of the entry; entries in an alphabetical span up to 3¼" in length were assigned a single number and bracketed together, 3¼" being the maximum vertical span of the camera lens. Many bibliographical problems arose as entries were combined in a single file, but these and other problems were successfully solved.

By June 1, 1963, the editorial work had been completed; the finished copy was then sent to London in nine large trunks as personal baggage of the editor—who remained in London long enough to proofread galleys for this, the third edition.

Acknowledgments. The Joint Committee on the Union List of Serials wishes to express its appreciation to the organizations and persons who have made this publication possible:

The Council on Library Resources, Inc., without whose generous assistance the task of preparing the third edition could not have been undertaken;

The Library of Congress, which administered the project and provided space for its operation;

Dr. Frank B. Rogers, who, while chairman of the Joint Committee, carried the burden of the negotiations which resulted in securing financial support for the project;

Dr. Andrew D. Osborn and Mr. Wyllis E. Wright, past chairmen of the Joint Committee, who kept the idea of a third edition of the *Union List of Serials* alive during a difficult period;

Mrs. Edna Brown Titus, the editor, and her staff, for intelligent and faithful attention to a multitude of details whose sum accounts for the usefulness of this list; and, finally,

The hundreds of libraries which cooperated in recording their holdings and without whose aid no *Union List* could have come into being.

HOWARD ROVELSTAD, *Chairman*
Joint Committee on the Union List of Serials

INTRODUCTION

The third edition of the *Union List of Serials* follows closely the pattern of the second. The demand for its preparation arose from: (1) the need to incorporate into one arrangement the titles and holdings in the second edition and its two supplements; (2) the desirability of making major additions and changes in holdings of titles in cooperating libraries; (3) the revision and correction of earlier entries; and (4) the addition of a selected number of new titles which began publication before 1950 and which were within the scope of the second edition but not included for varying reasons.

The classes of serials in general excluded from the scope of coverage of the second edition and its supplements are given below and the same criteria were followed in the selection of new titles to be added to the third edition.

Classes of Serials Generally Excluded

1. Government publications (except periodicals and monographic series issued by governments).
2. Administrative reports of societies, universities, corporations, etc.
3. Almanacs, gift books.
4. American newspapers.
5. English and other foreign newspapers published after 1820.
6. Law reports and digests.
7. Publications of agricultural and other experiment stations.
8. Publications of local, religious, labor, and fraternal organizations, boards of trade, chambers of commerce.
9. Publications of national and international conferences and congresses, etc.
10. House organs (unless of technical or scientific value).
11. Alumni and undergraduate and intercollegiate fraternity publications.
12. Trench papers.
13. All titles having a highly limited or ephemeral value.
14. United Nations publications.

Selection of new titles. New titles to be included in third edition were obtained from the following sources: (1) the National Union Catalog; (2) *Serial Titles Newly Received (1950-1952);* (3) *Southeastern Supplement to the Union List of Serials (1959);* (4) reports of pre-1950 serials previously sent to *New Serial Titles (1953-);* and (5) reports made directly to the editorial office by cooperating libraries.

General. The Union List of Serials Office was established at the Library of Congress as a unit of the Processing Department and became operational on August 24, 1959 with the appointment of the Editor. On August 28, the Executive Committee of the Joint Committee

met with the Editor to discuss and decide on various matters of editorial policy concerning content, scope, form of entry, changes and additional locations, reporting, the checking edition, and the time schedule for completion of the work.

It was decided at this meeting that additional locations for new serial titles acquired by cooperating libraries since the second edition and supplements were to be recorded in the third edition for significant titles only—titles not commonly held. Additional locations were not to be listed whenever ten or more locations had already been listed in the second edition and supplements unless considered both desirable and necessary—e.g., geographical considerations. The purpose of this policy restriction was to avoid the need to record an excessively large number of locations for commonly held titles; and also, that in view of the methods to be used in the compilation of the third edition, it was the general view of the Committee that ten locations would be considered sufficient in most cases.

The months of September and October 1959 were taken up in the main with the recruiting of staff, the beginning of withdrawal of serial entries from the National Union Catalog (this work was completed by January 1960), and the preparation of the *Prospectus, Union List of Serials, Third Edition*, based on the decisions made at the meeting of the Executive Committee in August.

The *Prospectus* was issued in November 1959 and sent with a letter of invitation to all libraries which had participated in the second edition and the two supplements, and to libraries contributing to or subscribing to *New Serial Titles*—a total of 1,133. By June 30, 1960, 835 American and Canadian libraries had announced their willingness to participate in the compilation of the third edition.

During the period January 1960 through September 1961, the staff time was spent in the various editorial operations involving the review of entries taken from the National Union Catalog and those received from cooperating libraries, searching, deleting of holdings, making bibliographical changes, the selection and preparation of entries for the checking edition, and finally the consolidation of the holdings for new titles reported by cooperating libraries in the checking edition. Preparation of copy for the printer began in October 1961 with the mounting process. Final editorial adjustment of the entries for camera exposure began March 1, 1962 and this part of the work was completed by June 1, 1963.

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The total number of cooperating libraries represented in the third edition amounts to 956, as compared to a total of 712 in the second edition—an increase of approximately 34%. A tabulation of the number of reporting institutions by State follows the *List of Cooperating Libraries*.

Summary of operations. It would be difficult to describe in detail the complex procedures involved in the preparation of the third edition. The following summary will present the principal elements of the workload involved in the review, searching, and selection of new titles, the identification of bibliographical changes, deletions, and added locations.

1. A total of appoximately 1,000,000 entries was reviewed for appropriateness for inclusion. Of this total over 352,000 were entries removed from the National Union Catalog and about 650,000 entries were received from cooperating libraries.

2. After review of these entries approximately 450,000 were processed. This involved searching the titles in the second edition and the two supplements to locate: first, new titles for inclusion in the checking edition; second, bibliographical changes; and third, added locations. Also about 25,000 symbol deletions of library holdings were made for serials no longer retained in cooperating libraries.

3. Of the 450,000 titles searched about 70,000 were found to be new to the second edition and the supplements. Another review as to their appropriateness resulted in the selection of some 13,000 titles considered desirable for inclusion in the checking edition.

4. A final review and selection from the 13,000 titles by Mr. Wyllis Wright resulted in a net of 11,892 titles edited for inclusion in the checking edition.

5. The checking edition was issued in four parts in August and September 1960 and February and April 1961. With the return of the checking edition locations and holdings were edited and tabulated, bibliographical corrections in new titles supplied by cooperating libraries were made as reported, and the final preparation of new entries was completed.

The following statistical table shows: (1) The content of the second edition and the two supplements; (2) the content of the checking edition; (3) additions and changes in the third edition; (4) the total number of entries to be adjusted; and (5) total entries in the third edition.

Items	2nd Edition	1st Supp.	2nd Supp.	Checking Edition	3rd Edition	Total for Adjustment in 3rd Edition	Entries & Cross References in 3rd Edition
Number of Serial Titles	112,440	9,699	22,418	11,892	—	156,449	156,449
Titles with Additional Locations	—	25,928	—	—	55,000*	80,928	—
Titles with Bibliographical Changes	—	299	4,577	—	8,081	12,957	—
Cross References	36,447	2,655	13,971	8,440	9,025	70,538	70,538
Total	148,887	38,581	40,966	20,332	72,106	320,872	226,987

* Approximate estimate based on sampling.

Acknowledgments. The editor wishes to express her appreciation to the Joint Committee for the opportunity to serve with them in the preparation of this edition of the *Union List of Serials*. Special thanks are due Dr. Frank B. Rogers, Mr. Howard Rovelstad, and Mr. John W. Cronin, who gave so generously of their time for consultation and advice.

It was the willing cooperation of the American and Canadian libraries in supplying reports on their serial holdings which made this compilation possible. They, too, receive our thanks.

The list of names of staff members of the Library of Congress who gave hours of assistance on an overtime basis is long. Of this group, there should be mentioned especially Mrs. Lucia Borski of the Descriptive Cataloging Division who proofread all new and revised entries in the Slavic languages and advised on Cyrillic entries; Mr. Johannes Dewton of the National Union Catalog Division who gave generously of his own time to help in the final editing; Mr. Nelson Parker and Mr. Francis Fenwick of the Catalog Maintenance Division who mounted all the entries and helped so willingly in other matters. Acknowledgment is also made to the staff of the Processing Department Office for their assistance in the many miscellaneous and administrative matters concerned with the Project.

Finally, to Mrs. Gloria Hsia of the Editorial Office who first served as Cataloging Editor and later as Assistant Editor, great appreciation is given for her sustained interest and excellent work throughout the Project.

EDNA BROWN TITUS, *Editor*

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SAMPLE ENTRIES

Sample Entry 1

MUSICAL union, London
Record of the musical union. 1-36,1845-80||
Title varies: Annual record; Annual reports; etc.
CtY 24 MH*
DLC NN [1]-6,9-27
MB 1-[5-6]7

Explanation:

"1-36,1845-80 ||" indicates that this serial which began in 1845 ceased publication with volume 36 in 1880. CtY (Yale University) has volume 24 only. DLC (Library of Congress) has a complete set. *This is the only instance where the symbol alone is sufficient.* MB (Boston Public Library) has volumes 1 through 7, but volumes 5 and 6 are not complete. MH* (Harvard University) has holdings according to entry record in the National Union Catalog. NN (New York Public Library) has an incomplete file from volume 1 through 27. Volume 1 is incomplete, and volumes 7 and 8 are lacking.

Sample Entry 2

PHOTOGRAPHY: a monthly supplement to "World's press news." London. 1,Ag 1932+
CL (1) NN 1+
IU [4-6] NRE 1+
MH 1+ OT 4-[7]
MdBE 4+ PP [1-4]+

Explanation:

"1,Ag 1932+" indicates that this series which began in August 1932 is still currently published. MH (Harvard University), NN (New York Public Library) and NRE (Eastman Kodak Company, Research Library) have complete files beginning with volume 1 and also subscribe currently to this publication. MdBE (Enoch Pratt Free Library) has a complete set beginning with volume 4 and subscribes currently. CL (Los Angeles Public Library) has only volume 1 and that is incomplete. IU (University of Illinois) has only volumes 4 through 6, all of which are incomplete. OT (Toledo Public Library) has volumes 4 through 7, of which volume 7 is incomplete. The absence of plus signs indicates that these libraries do not subscribe to this publication currently. PP (Free Library, Philadelphia) has volumes 1 through 4 which are incomplete, and a current subscription beginning with volume 5.

Sample Entry 3

INTERNATIONAL yearbook of agricultural statistics. (International Institute of agriculture) Rome. 1910+
CAL 1910,25/26-27/28

Explanation:

"1910+" indicates that this serial which began in 1910 is still published currently, but does not bear any volume numbering. CAL (University of Western Ontario, Canada) has 1910, 1925/26-1927/28.

Sample Entry 4

MINNESOTA
University
—Institute of child welfare
— —Circular. 1-2,1928-29; (s2) no1-6,1934-36||
CtY 1-s2 no5 NN 1-2; s2 no3-6

Explanation:

"1-2,1928-29; (s2) no1-6,1934-36 ||" indicates that this serial which began in 1928 ceased with volume 2 in 1929, but resumed with number 1 in 1934. In order to distinguish between the two "series" (s2) was supplied for the later issues. CtY (Yale University) has volumes 1 and 2 and numbers 1 through 5 of series 2. NN (New York Public Library) has volumes 1 and 2, but lacks numbers 1 and 2 of series 2.

Sample Entry 5

MISSOURI banker's association
Proceedings. Jl 1879-80; 1,1890+
NN 1879; 18-20, 23-40
NNC 1879-80; v82-84

Explanation:

"Jl 1879-80; 1,1890+" indicates that this serial did not bear any volume numbering until 1890. NN (New York Public Library) has year 1879 and volumes 18 through 20, also volumes 23 through 40. NNC (Columbia University) has years 1879-80 and volumes 82 through 84. (Volume designation required in this case because of possible confusion with year.)

Sample Entry 6

NN [2+] OU*

Explanation:

"NN [2+]" indicates that the New York Public Library has an incomplete current file beginning with volume 2, and no attempt is being made to fill the gaps. The plus sign within brackets was used in one case only, namely: a title received currently as a gift without any assurance of receiving a complete file. OU* indicates that Ohio State University has holdings according to entry record in the National Union Catalog.

Sample Entry 7

* KIRTLAND society (Cleveland Museum of natural history)
Bulletin. 1,Ja 1943+

Explanation:

The asterisk before the title was used in the first supplement only to signify that this title was new; that it was not in the second edition. This symbol is obsolete in the third edition.

Sample Entry 8

‡ ARCHIVES of physical medicine. (Radiological society of America; American congress of physical medicine) Iowa City, Iowa; Omaha.
1,1920+
1-25, 1920-44 as Archives of physical therapy.

Explanation:

The double dagger (‡) before the title was used in the first (as well as the second) supplement to indicate a changed title. In the second edition this entry was found under Archives of physical therapy. This symbol is obsolete in the third edition.

Sample Entry 9

‡ NEAR East college association, inc.
Newsletter. N.Y. no1-40,Ap 1939-Mr 1948
⊗ no5-34 as its Bulletin. Issued 1939-45 by
① Near East service (Ap-S 1939 under its
▲ earlier name: Near East society) Superseded by Near East society. Bulletin

Explanation:

The double dagger (‡) before the title was used in the second supplement to indicate that this was a changed title. The symbol ⊗ indicated that an entry would be found in the second edition, and the bibliographical note led to the entry there under Near East service. Bulletin. The symbol ① indicated that an entry would also be found in the first supplement and the bibliographical note led to the entry there: Near East college association, inc. Bulletin. The black pyramid (▲) signified that holdings were not recorded in the second supplement; users should consult entries in second edition and first supplement for locations. The symbols ⊗, ①, and ▲ were used in the second supplement only and are obsolete in the third edition.

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UNION LIST OF SERIALS

Third Edition

The — —. Washington. v1 no1-8,F 18-Je 17? 1826‖?
MWA no2,4 N no1 NN

A. (Van Alfen adviesbureau voor reclame) Amsterdam 1,1934+
NN 1+

"a.A." *See under* Actors' association, London

AA, apparel arts. See Gentlemen's quarterly

A. A. Architectural association journal. See A. A. journal

A.A. grapevine. (Alcoholics anonymous) N.Y. 1,Je 1944+
Je 1944-Mr 1946 as Grapevine
CU-A [2]+ NN 1+
DLC 1+ NNN 1+
DSG [2]+ VU [2]
IaAS 1+ WU 1+
IaU 1+ WvU 6+
InSt [2-4]

A. A. journal. (Architectural association) London. 1, 1887+
v1-20 no223 as the association's Notes; v20 no224-v69 no772 as its Journal
CaViP [30-38] NN 11+
DLC 6[7-9]10, 12+ NNC [50-52]+
DSI-C 51+ TxHR 75+
IU 30+

AAA. *See* American automobile association

A.A.A.S. bulletin. (American association for the advancement of science) Lancaster, Pa. v1-5 no12,Mr 1942-D 1946‖
MiU 1+ WMM 1+
MnU 1-[3] WaU 1+
MoS 1+ WaWW 3+
MoSB [1]+ WyU 1+
MoSU 1+

AACC transactions. See American association of cereal chemists. Transactions

AAF review. (U. S. Army air forces) N. Y.; Washington. v29 no6-8, Jl-S 1946‖
Supersedes Air force (which continued publication as the official journal of the Air force association) and concurrently continued its numbering
AMAU MoKL
AzTeS MsSM
CCC MtU
CLSU [29] NBC
CLU NNC
CStH [29] OCI
Ct ODaWT
CtNIC OrCS
DLC OrP
DNW OrU
DeWI PPi
IU PPiU
InLP TxFTC
InU Vi
KMK ViBlbV
KyLo Vt
LNHT WHi
MdAN WM

S 1944-F 1945 by the association under earlier names: Mr-D 1928, League of nations non-partisan association; Ja 1929-Mr, S 1944-F 1945, League of nations association (Mr 1928-N 1934 by the association's Illinois and mid-west office) Ap-Jl 1944 by the United nations association. Suspended Je-Ag 1939. 5 repeated in numbering. Ja 1950-O 1954 (exclusive of 2d issue in Mr, Je, S and D) this publication and United nations reporter by Dept. of public information of the United nations have identical text with the exception of last page

AzU [5-6] MtU 11+
CCC [5-6]-[11] MtU-L 1+
CL [5]+ MnSH 7+
CLSU [3-9]+ MnSST [9]+
CSt-H 1+ MnU [1]+
CU [5-6] MoS 1+
CaL 5-[9] NBuG [5]-[7]-[9]
Ct 1-12 NCH [5-11]
CtHC 12+ NN 1+
CtNIC [7]-[11] NNC 5+
CtW 1+ NNU [7-11]+
CtY [2-4]-[6]+ NNUT [5-11]
DCE 1+ NR [4]-[7-8]
DL 7+ NPV [11]+
DLC 1+ NStC 6+
DeU [5]-[8] NJNbN [11]+
FU [5-7] NJP [5-11]+
GEU [5,8] NJR [5-6]-[11]
ICU [5]-11 NvU 10+
IU 1+ OCU 4-[7-8]-[11]+
InDm [2-3]1+ OT [8]+
InDmD 1-4,6+ OU 1-6
InGG 2+ OrP [5]-[10]
IdU 2-6 OrPR [1937-38]

AzU 1+
C 1+
CL 1+
CLSU 1+
CMC 1+
CSfP 1+
CSt 1-[3]
CSt-H 3+
CSt-L 1+
CU 1+
CU-A 1+
CU-M [1-3]
CaL 1+
CaM 1+
CaOG 1+
CaON 1+
CaTU 1+
CoDM 3+
CoGrS 1+
CtU [1-3]
CtY 1+
DA 1+
DGS 1+
DH [1]+
DLC 1+
DSG 1+
DSI-M 1+
GAT 1+
GU [1+]
ICF 1+
ICJ 1+
ICU 1+
IEN-M [1-2]
IU 1+
IU-M 1[2+]
IaAS 1+
IaU 1+
In 1+

InLP 1+
KMK 1+
KU 1+
KyBB 1+
KyLU-M 1+
LNHT 1+
MA 1+
MBU 1+
MCM 1+
MH 1+
MH-BL 1+
MH-F 1+
MH-M 1+
MH-O 1+
MH-P 1+
MH-Z [1+]
MMeT [1]+
MSM [1]+
MWhB 1+
MdBE 1+
MdBJ 1+
MiAiC 1+
MiMiD 1[2]+

MoSU-M 1+
N 1+
NBG 1+
NBM 1+
NBP 1+
NBu 1+
NBuB 1+
NBuU 1+
NCE 1+
NHC 1+
NIC 1+
NIC-A 1+
NN 1+
NNA 1+
NNBG 1+
NNC 1+
NNC-M 1+
NNCorM [1-2]+
NNE 1+
NNN 1+
NNU 1+
NNU-M 1+
NPV 1+
NRU 1+
NYBT 1+
NcGW 1+
NcRS 1+
Nh 1+
NhD 1+
NhU [1]+
NjMD 1+
NjP 1+
NjR 1+
OCL 1+
OCU 1+
OCl 1+
OClW 1+
OU 1+

OWC [1]+
OrCA 1+
OrP [1-2]+
OrU 1+
PP 1+
PPAP 1+
PPC 1+
PPF 1+
PPP 1+
PPT [1-2]
PPT-P 1+
PPiD [1]
PPiU [1]+
RPB 1+
ScCM 1+
TNJ-P 1+
TxCaW 1+
TxLT [1-2]+
TxU 3+
TxU-M 1+
UU [1+]
VBP 1+
VU [1-2]+

MnM
MnS

WaU
WyU

AAGQ, apparel arts, gentlemen's quarterly. See Gentlemen's quarterly

AAIN newsletter. See American association of industrial nurses. Journal

A.A.M.D. news. (American association on mental deficiency) Washington Crossing, N.J. 1,O 1948+
CLSU 1+
CLU 1+
CSt-L [1]
CU 3+
DSG 1+
ICJ 1+
IEN-M [1]
IaAS 1+
IaU 1+
IaM [1]
MiDW [1]+
MiU 3+
MoKL 1+

NBC 1+
NBM 1+
NNN 1+
NbU 1+
PLeB 1+
PP 1+
PPC 1+
PPT 1+
TxU-M [1]
ULA [1]+
WU 1+
WaU [1]+

AAOA record. (Auxiliary to the American osteopathic association) Palos Heights, Ill.
CLOst 7+

A.A.P.I.C. (Confederación económica argentina) Buenos Aires. no1,My 1948+
DLC 66

AARMS forward. See MS keynotes

A. A. S. *See* Asociación de automovilistas de Santiago

AATSEEL journal. See Slavic and East European journal

AAUN news. (American association for the United nations) N. Y.; etc. 1, Mr 1928+
Mr 1928-Mr 15 1935 as League of nations chronicle; Mr 30 1935-My 17 1939, Chronicle of world affairs; S 1939-Ap 1940, New world; My 1940-D 1949, Changing world; Ja-Mr 1950, Newsletter; Ap 1950-O 1954, United nations reporter. Mr 1928-Mr,

InGD 5+
InLP [5-9]+
KU 2+
KyBB [9]-[11]
LU 8+
MB [5]-7
MH [2-3]-[6]-[9]+
MNS [5-8]
MoSM [5]+
MoUG 6+
MoUJ [1-7]+
Mr 5-[7]+
MtD [2]+
MoUM [9-11]+

CaL 5-[9-11]+
FDS [12]+
MoU [4-9]11+
MoU 12-13
N [1931]-[36]

PHuJ [9]-11+
PLF [8]-11
PLeB [4-7]
PMA [5-6,9-11]
PP 1+
PU 9+
RPB [1-7]11+
TxU [11]+
VW [9]+
WAL [4-7]
WM [1]+
Wa [7]+
WaU 5+

OrU 1+

OMC [5-9]-[11-14]
OOxM [2-11]+
OT [11]-[13]
ScU 14+

A.B.A. (Association belgo-américaine) Bruxelles. 1,Jl 1946+
Numbering irregular
VU 1946[47-48]

ABA bulletin. (American booksellers association) N. Y.
N 1953 never published
MiU 12+
NN [11], 1949+

A. B. A. national instalment credit conference. See National instalment credit conference

A B C. Brussels; etc.
DLC [14],1915+

A. B. C. (American and British-Commonwealth association) London. no1-9, S 1942-Ja 1945; (ns) v1 no1-8, My-D 1946‖
S 1942-Ja 1945 as the association's Bulletin
DCE 2-3, 6-7 NN *

A. B. C. (Generalsekretariat zum studium des bolschewismus) Berlin. 1-2,Mr 1919-S 1920‖?
CSt-H [1-2]

A B C; diario ilustrado. Madrid. 1-35 (no1-11,184),1905-Ap 6 193v‖?
NN [11,14,20-22,24-27,30,33-35]

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MH 1+
MH-BL [1+]
MH-G 1+
MWhB [1]+
MeU 1+
MiEM 1

CSfA [1-2,4]
CaOA 1+
MiU 1-[4]
NhD 1-3
PPi 1+

TNV 1+
TxU [1]+
ULA [1-3]
VBP [1-4]
WU 1+

PU 1+
RPB [1-4]

WaU 1+

Harbin laboratory
Through 1936 as Manchuria research institute
—Report. 1,1936‖
DA NNM

INSTITUTE of Scottish architects. *See* Royal incorporation of architects in Scotland

INSTITUTE of scrap iron & steel, New York
Yearbook. 1,1969+
ICA 1+
IC 1+
NNC 1+
OCl 1+

IU 1+
MiD 1+
OU 1+

CtY 1
MB 1+
MCM 1939,43
MiU 1,4

MoS 1+
N 4
NN 1-3
OT 2,4-5

INSTITUTE of sewage purification, Johannesburg. *See* Public health

INSTITUTE of sewage purification, London
1391-33 as Association of managers of sewage disposal works
Journal and proceedings.
Through 1927 as its List of members and associates and proceedings; 1929-32 Proceedings
DLC 1938
MiEM 1913
MCM 1935+
MdBJ 1938

NIC 1902-03,05-20,22
NN 1915,22
NNE 1904,06-08
WU 1909,16,18,22,24+

ICJ 1953+
InLP 1953+
MH 1946+

NNE 1904, 06-08, 40-41
NcU-H 1932-48, 50-56
TxHR 1955+

INSTITUTE of social and economic research, Shanghai. *See* China quarterly

INSTITUTE of social and religious research, New York
Town and country studies. 1-12,1922-24; 1924-29‖
1-10 as Unique studies of rural America, town and country series by Committee on social and religious surveys

Schriften. 1-5,1929-36‖
CSt 3 CLU 5
CU 2-4 IaU 1-[3]-5
CaM 3 NRU 3
CtY 3-4
DLC
ICU
IEN 2-3
IU 5
InAS 6
MB 3
MH
MH-BA 1,3
MWelC 5
MdBJ 1-4
NIC 3

NN
NNC 1,3
NPV 5
NcD 1
NhD 3
NjP
OCU 3
OCIW 3
OU 1,5
PU 3
RPB 2,4
TxU 3-4
WU 2-5
WaU 3-4

See also Studies in philosophy and social science

INSTITUTE of social research, Peiping
Founded 1926 as the Social research dept. of the China foundation for the promotion of education and culture. In 1929 name was changed to Institute of social research. On Jl 1 1934 merged with Academia Sinica. National research institute of social sciences to form the academy's Institute of social sciences

Annual report. *See* Academia Sinica. Institute of social sciences. Annual report

Bulletin. 1-7,D 1928-33‖
CL
CSt 1
CU
CtY 1
DA
DL
DLC
ICU 1
IU 1-3,5-7
MH 1-4,6-7

MH-BA
MiU 1
MnU 1-3
NIC-A
NN
NNC 7
NNR 1-5
NhD
OCl
TxU 7
CaOA 1-3, 5-7

Monthly index numbers of the cost of living in Peiping. *See under* Academia sinica. Institute of social sciences
Social research publication
—Chinese series.
CU 8-10,13-14,1927-31

—Monograph series. 1-3,1928-31‖
CU
CaOA
CtY
DA
DL

IU
InAS 1
NNR
NjP 3
TxU 3

MH-AH 1
MH-BA
MNS
MSM
MWC
MWelC
MdBJ
MiD 1
MiGr
MiU
MnNC 1
MnU 1-2
MoS 1
MoSW 1

ODa 3
OO
OOxM 3
OU
OrU
PPi
PU
RP 1
RPB
SdU 1-2
TxHR
TxU 1
WU
WaU

Cities committee
—Papers for the present. no1-14,1916-21‖?
Also numbered in series
CaT 1-5,8 ICJ 1-2,4-5
MH 2,3,14 8-9

NN 1-9,11-12,14
NNR 1-5,9 MiU 1-3

INSTITUTE of South African architects. *See* South African architectural record

INSTITUTE of statesmanship, Winter Park, Fla.
Addresses and discussions. 1929‖
The institute is held under the auspices of Rollins college
CU
Ct
FU
IaU
MWelC
MiU
MnU

NN
NjP
OCl
OCIW
WDB

INSTITUTE of statistical mathematics, Tokyo
Annals. 1,1949+
CLU 1+
CPT 1+
CSt 1+
DLC [1-3]
ICU 1+
IEN [2]+
InAS 1+
MCM [1-4]

MH 1+
MdBJ 1+
MiEM 1+
MoKL 1+ NN 1+
NcD 1+
TxHR 1+
WU 1+
RPB 1+

INSTITUTE of statistics, Oxford. *See under* Oxford. University

INSTITUTE of student aid, Inc., Hartford, Conn. *See* Student-aid

INSTITUTE of technology, Pittsburgh, Pa. *See under* Pittsburgh, Pa. Carnegie Institute

INSTITUTE of technology, Pullman, Wash. *See under* Washington (State) State college, Pullman

INSTITUTE of technology, Tokyo. *See under* Tokyo

INSTITUTE of technology and plant industry, Dallas. *See under* Southern Methodist university, Dallas

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DE 12
DLC 1-12
I 12
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IaU 1-12
InLP 2-3,6-12
KU *Fragments*
LU 11
MA 11
MH-AH 12
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MdBE 1-12
MiD 6

MiEM 1-12
MiGr 1-12
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MnHi 1-12
MnU 5-8,11-12
MoU 1-12

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NBuG 4-12
NN 1-12
NNC 1-12; 1924
NNC-T 1-12
NNG 4-11
NNU 1-12
NRU 1-12
NhD 1-12
NjPT 1-11
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OO 4-7,9
OOxM 11
OU 4-12
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OrP 1-10 OT ||
PHC 4,11-12
PLeB 1-2,5,9-11

PPI 1925
PU 4-9
PVC 6,9,11
RP 5,11

RPB 1-12
TNV 1-12
TU 4,7,9-12
VU 1-2,4-12,1924-25
WaS 1-12

INSTITUTE of social economics, New York
Through My 1899 as Gunton institute; 1921-22 Committee on social and religious surveys
Lecture bulletin. v1-7 no5,N 1897-D 15 1903‖ 1-2 as Bulletin; v3 not Weekly bulletin
CSt [3,6-7]
CaO
CtY [1-5]
ICN 1-3
IU [1-2]
Ia 1-4 IaAS 1-2
InGD
LU 1,3-5
M [3-7]
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MB 1-3,5-7

MH [5-6]7
MMeT [2,3-6]
MWA [1-2]
MoSJ [5-6]
MnU 3-6
NIC [1-2,3-7]
NN
NNC [3-7]

OU 1-2
WU 1-3

INSTITUTE of social engineering. *See* New analyst

INSTITUTE of social order, Melbourne.
See Twentieth century. Melbourne.

INSTITUTE of social order, St. Louis, Mo.
See Social order

INSTITUTE of social research, New York
1923-Spring 1933 as Frankfurt am Main. Universität. Institut für sozialforschung; 1934-39 International institute of social research. Affiliated with Columbia university

DLC WaU

See also Chinese social and economic history review

INSTITUTE of social work, Ann Arbor. *See* under Michigan. University

INSTITUTE of sociology, London
Through 1929 as Sociological society
Annual report. Westminster, England. 1931+
DLC 1931 NN 1931
ICJ 1931+

Reports of annual conferences. 1,1935+
1935 as Social sciences; 1936 as Further papers on the social sciences; 1937 as Papers on the social sciences
CLU 5+ MiU 3,5
CU 4 NN 1+
CtY 1+ NNU 1+
DCU 5 NcU 5
DLC 1-3,5 PU 5
FU 3-5 WaU 5-6
KyU 1+ WvU 3
MWelC 3 CoDU 3

Sociological papers. 1-3,1904-06‖
Superseded by Sociological review
C 1-2 MoU
CLU N
CSf NB
CSt NBP 2
CU NBu 1
CaL NBuG
CaT NCH 1-2
CaTU [1]-3 NIC
CtY NN
CtY-D 2 NNC 2-3
DC NNC-T
DL NNCoC
DLC NNG 1-3
ICJ NNN 2
ICN NNR
ICU NNU
IEN NRU
IU NbU
Ia NcD
IaDmD 2 NcU
IaU IaAS NhD
InGD NjP
InU OC
KU OCH
LNHT 1 OCU
MB OCl
MBAt OClW
MH ODW

INSTITUTE of television engineers of Japan. *See* Nippon terebijiyon gakukai, Tokyo

INSTITUTE of textile technology, Charlottesville, Va.
News letter. v1-2 no5,S 1948-Ja 1949‖
CL OCl 2
DA [1] WM
IU WU
NjR [1]

See also Textile technology digest

INSTITUTE of the aeronautical sciences, New York
Aeronautical archives. *See* Aeronautical reader's guide

Proceedings of the founders' meeting. Ja 28, 1933‖
Later proceedings in Journal of the aeronautical sciences
AzU
CL
CLSU
CLU
CSt
CU
CaM
CaTU
CoDU
CoFcS
CoG
CoU
CtHT
CtW
CtY
DLC
FTS
FU
GA
GAT
GU
IC
ICA
ICJ
ICU
IEN
IU
Ia
IaAS
IaDmD
IaU

IdU
K
KMK
KyLU
KyU
LU
MA
MCM
MMeT
MNS
MSM
MWC
MdBJ
MdBP
MiD
MiEM
MiGR
MiHM

MoK
MoU
MtBC
MtU
N
NBuU
NIC
NNC
NNCoC
NNE
NNU-H
NPV
NR
NRU
NSU
NcD
NcU
Nh
NjP
NjR
NmU
OCU
OCl
OClW
OO
OOxM
OU
OrCA
OrP

OrU OT
PBL
PEL
PLF
PLeB

PPT
PPiC
PSC
PSt
PU
PVC
SdU
TNV
TxHR
TxLT
TxU
UPB

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ISIS. A London weekly publication, ed. by a lady. London. 1,F 11-D 15 1832‖

CSmH	NNC
CtY	NPV
DLC	

ISIS. Eine monatsschrift von deutschen und schweizerischen gelehrten. Zurich. 1-6,1805-07‖

CtY	NNM
MH	NjP

ISIS. Encyclopädische zeitschrift, vorzüglich für naturgeschichte, physiologie &c. (Muenchener verein für naturkunde) Munich. no1-6,1850‖

PPAN

ISIS. International review devoted to the history of science and civilization. Brussels; Bern. 1,Mr 1913+

1-2 subtitle reads: Revue consacrée à l'histoire de la science. Suspended Jl 1914-Ag 1919

Index: 1-3 in 3; 1-20,1913-33 in v21

ArU [3,6,8]	MeB 1+
AzU [3-25]	MeU 17+
CCC 6+	MiD [17-22]28+
CL 12+	MiU 1+
CLM 26+	MnCS 6-14
CLSU 7+	MnRM 30+
CLU 1+	MnSJ 1+
CPT [12-21]-[26]+	MnU 1+
CSfA [3]25+	MoS no16,19-29,33,35-38,40-51
CSmH 1+	MoSU-M 22+
CSt 1+	MoSW 2+
CSt-L [1-11]15-[23-24]	MoU 1+
CU 1+	N 1+
CU-M [9-10]-[12-13, 17]+	NAW 15+
CU-S 6-27	NBB no71-72,76-83
CaL 1+	NBC [1]+
CaM 1+	NBM 1+
CaOG 21+	NBuG 1-8,22+
CaON [2]+	NCH 1+
CaSU [1]-[2]	NCaS 4+
CaTA 2+	NIC 1+
CaTU 1+	NN 1+
CoCC 15+	NNA 1+
CoDM [8,27]	NNC 1+
CoDU 22+	NNC-M 24+
CoU 2-23	NNCoC 2+
CtHT 1+	NNE 2+
CtNlC 2+	NNJ 10+
	NNM 1+
CtW 1+	NNN 1+
CtY-L 1-[5-14]-[19]-[29]	NNU 6-[20]
DCU 1+	NNU-H 3+
DGS 1+	NNU-M [13,15,17-18] 32+
DGW 2+	NPV 1+
DLC 1+	NRU 1+
DSG 1+	NSU 1+
GEU 28+	NSsS 8+
ICA 28+	NbU 1+
ICF 5+	NcD 1+
ICJ 1+	NcU 6+

ISIS. Zeitschrift für alle naturwissenschaftlichen liebhabereln. Berlin. 1-14,Ap 6 1876-89‖

CU	NNC
CaM 5-14	NNC-M 1-[4]11-[13] 14
DA 1-5,7-14	OCL 1,3,5-6
DSG 1-[11]	PPAN
MnU	
MoS 8-10	

ISIS budissina. (Naturwissenschaftliche gesellschaft Isis zu Bautzen) 1896-1924; v11, 1925/27+

1896-1905 as the society's Sitzungsberichte und abhandlungen; 1906-24 as its Bericht

CaM 1898-1924; v11-12	MoU 11+
CaTR 1910+	NIC-A 12+
DA 1896+	OCL 11-12
IaAS 1896+	OCl 1896
MBN 1919-20	OClW 1896-1901,16-20
MH-Z 1919/20	PPAN 1896+
	NNM 1896/97

ISIS moderne. Paris. O 1896-Mr 1897‖?

CaT 1896-97	NIC 1896-97
MH 1	NN 1896-97

ISIS von Oken. Jena; Leipzig. 1-41,1817-48, 1817-19 as Isis, oder encyclopädische zeitung. Includes supplement: Litterarischer anzeiger; also 1-6,9,13,17 of the Amtlicher bericht über die versammlung der Gesellschaft deutscher naturforscher und ärzte. 26,27,36 not published. 1817 p1553-60 confiscated

Index: 1-19; 20-29; 30-39

CU	MBA [1]-[18]20-22
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ISKRA. Grand Forks, B.C.

PSC-P no[61-246], 1945+

ISKRA. (Rossiĭskafi sotsial-demokraticheskafi rabochafi partiĭa) Munich; London; Geneva. 1-5 (no1-112),D 1900-O 1905‖

CSt-H	MnU
CtY *Reprint*	NN no1,4-6,10-20,26-112 and *Reprint*
DLC no1,3-112 and *Reprint*	NNC 3-5
MH	ZCN 61-63

ISKRA. Massovyĭ nauchno-populiarnyĭ zhurnal Gosudarstvennogo izdatel'stva i Glavnauki. Moscow. 1-10,1923-O 1930‖?

DLC 1[2]-8	NNM 1-6,10
NN [8]	

ISKRA, satiricheskiĭ zhurnal s karrikaturami. St. Petersburg. 1-15,1857-73‖

1-12,1857-68 as Listok znakomykh

CSt-H 1-9	NN 1-5,7

ISKUSSTVO i zhizn'. Leningrad. 1,1928+

1-14,1928-37 as Rabochiĭ i teatr

DLC 1+	NN [1-8]+
MH [7]9+	

ISKUSSTVO kino. Moscow. 1,1930+

1930 as Kino i zhizn'; 1931-32 Proletarskoe kino; 1933-35 Sovetskoe kino

CSt-H [4]-6	MH [9]
CU 3+	NN [1,3-4]-6
DLC 1-[9]+	

ISKUSSTVO massam (dlia derevni). *See* Samodeiatel'noe iskusstvo

ISKUSSTVO v fizhnoĭ Rossii. Kiev. 1909-11?

Subtitle varies. 1909-10 as Iskusstvo i pechatnoe dĭelo; 1911-12 Iskusstvo, zhivopis', grafika, khudozheatvennafi pechat'

DLC	NNFr
NN 1910-14	ICB 1910-13

ISKUSSTVO v massy. (Assotsiatsiia khudozhnikov revoliutsii) Moscow. 1-2,1930‖?

CtY [1]	NN 1-2
DLC 1	

ISLA. San Juan, P.R. v1-2 no10,S 1939-N 1940‖?

DLC 1-2	NN [1]2
DLC 1+	MH v1 no2+
LNHT [1]	NN [1]+

ISLA. (Sindicato de iniciativa y turismo) Las Palmas, Canary Islands. 1,Ja 1945+

DLC [1]

ISLA de Cuba; revista política, económica, literária y de administración. Madrid. v1 no1-23, Ja 12-S 27 1865‖

Superseded by Reforma

NN

ISLA de los ratones (hojas de poesía). Santander. 1, 1948+

NN 1-4,6-9,11-13,15+

ISLAM. (Anjuman-i-Khuddām-ud-Dīn) Lahore. 1,Je 7 1935+

Je 7-Jl 7 1935 as Fortnightly Islam

NN 1+

ISLAM; a quarterly magazine. London. v1 no1-3,Je 1935-Mr 1936‖

NN

ISLAM. Zeitschrift für geschichte und kultur des islamischen Orients. Strasbourg; Berlin. 1,1910+

None published between Mr 1942 and F 1944; Ag 1944 and S 1946; S 1946 and 1948

ICU 1+
IEN 1+
IEN-M 8[9]-[15]+
IU 1+
IU-M [22-25]
Ia [6-7,13,27]-29
IaAS 1+
IaU 1+
InIB 21+
InLP 1+
InU 1+
KU 1+
KU-M 24+
KyLU [9-20]
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KyU 18-25
LNHT [1913,20-21, 25]
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MB 1+
MBA 1
MBAt 5+
MBM 1-[31]
MBN [1]6+

MCM 1+
MH 1+

MH-M 6-[9,12]-[19]-[24]+
MH-P 6+
MH-Z [2]+
MNS 1+
MSM [1]+
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MWhB 1+
MdBE 2+
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NjMD 12+
NjP 1+
NjR 2+
NmU 19+
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OClW 1+
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OkU 6+
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PHC 1+
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PPC 1+
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PPiM 8+
PPiU 1,4-5,7-26
PSt [2]+
PU 1+
RPB 1+
TNV 6+
TU [4]-[7]-27
TxD 28+
TxHR [1,3-4,6-7]+
TxU 2-5,7+
VRM 21+
VU 1+
WU 1+
WaU 1+

MBAt 5-29
MiD 6,8-27,30+
MiEM 35+
NNCoo 22+
OCL 6+
OrCA [2]-[31]32+
TxDN 6+
ViMM 33+
WBB 6+

ISIS. Maandschrift voor natuurwetenschap. Haarlem. 1-10,1872-81‖
1-3 as Isis. Tijdschrift voor natuurwetenschap
CU
CaM
IU
OCL
PPAN

ISIS, oder encyclopädische zeitung. *See* **Isis von Oken**

DLC 1-8,10,12

ISKRY. Moscow. 1-17,1901-17‖
CSt-H 16
DLC 9-13
NN [6-8]
NNC [6]

ISKRY nauki. Moscow. no1-78,1925-30‖?
DLC 55-78

ISKUSSTVENNOE volokno. Moscow. 1-5,Ja 1930-35‖
German title: Kunstfaser
DLC
NN [1-3]

ISKUSSTVO. St. Peterburg. no1-62,1883-Mr 25 1884‖
DLC 1-50

ISKUSSTVO. (Glaviskusstvo) Moscow.
DLC no3-4,7-8,1929

ISKUSSTVO. (Gosudarstvennaĭa akademiĭa khudozhestvennykh nauk) Moscow. no1-4, 1923-28‖
DLC 1-2
MH 1
NN 1-3
NNC [3-4]
NNMM
NjP 1

ISKUSSTVO. (Soĭuzy sovetskikh khudozhnikov i skul'ptorov) Moscow, Leningrad. 1,Ap 1933+
CU 4+
DLC 1-[5]-[7]+
ICRL [3,6]9
MH 3-5
NN 1-[4]+
NNC 1[2]-[4]+
NNMM 1+
MNS [1933]+

ISKUSSTVO Azerbaidzhana. (Akademia nauk Azerbaidzhanskoi SSR. Institut azerbaidzhanskogo iskusstva) Baku. 1, 1949+
CU 6+
DLC 2+

ISKUSSTVO i deti. Moscow. 1-5,1927-31‖
1927-30 no3 as Iskusstvo v shkole
DLC 2[3]-[5]
NN [1]-[3]-[5]

ISKUSSTVO i khudozhestvennaĭa promyshlennost'. St. Petersburg. v1-4 no2 (no1-38), 1898/99-1902‖
Subtitle varies slightly. Suspended O-D 1901
CU [1898-99]-1902
CU [1898-99]
DLC 1-3
NN
MH 1-3
NN 1-[4]

--Khronika zhurnala . . . chronique de la revue Art et industrie. no1-48,1899-1901‖
DLC
MH
NIC 1-24
NN 1-24

ISKUSSTVO i pechatnoe dĭlo. *See* **Iskusstvo v liuzhnoĭ Rossii**

ISKUSSTVO i promyshlennost'. Moscow. no1-2, 1924‖?
NN 1-2

CSt-H 24-25
CU 1+
CtY 1+
DDO 1+
DLC 1-[28]+
ICF 1-14
ICR 17-23
ICU 1+
IEN 19+
IU 17+
MH 1+
MiU 1+
MnU 1-14
MoSW 1-11
NIC 16,27+
NN 1+
NNC 1+
NNMM 1-26
NjP 1+
NjPT 1-25,27+
OCH 1-21
OCl 1-26
OU 14
PU 1,7+
RPB 1-18
TxDaM 29+
WU 1-[26]

CU 1+
CaTU 2+
CtHC 1+
CtY 1+
DLC 1+
ICF 1-[14]
ICR 17-23
ICU 1+
IEN 19+
IU 17+
MBMu 1,5-6,8+
MH 1+
MiD-A 19-20
MiU 1+
MnU 1-14
MoSW 1-11
NN 1+
NNC 1+
NNJ 1-5
NNM [1-4,8]
NNMM 1+
NNUT 1+
NjP 1+
NjPT 1+
OCH 1,3-21
OCl 1+
OU 14

Supplement. *See* **Studien zur geschichte und kultur des islamischen Orients**

ISLAM d'hier et d'aujourd'hui. Paris. no1,1947+
CaTU 2,7
CtY 3,7+
DLC 2-3,7-8
ICU 1-3,7
MH 1,3
MiU 2,7
MnU 3-4
MoU 7
NN 1-4,7+
NNC 1-4,7
NjR 2
OCU 7
OCl 2-3
OU 7
PU 1+
RPB 6
VU 2

ISLAM-institut, Berlin. *See* **Islamische gegenwart**

ISLAM-Türk ansiklopedisi mühitülmaarif mecmuasi. *See* **Islâm-Türk mühitülmaarifi**

ISLAM-Türk nuhitülmaarifi. Istanbul. 1,1941+
v1 no1-47 as Islâm-Türk ansiklopedisi mühitülmaarif mecmuasi
CU no1-64
DLC [1-2]
NNC [1]
WU 1

ISLAMIC culture, the Hyderabad quarterly review. Hyderabad. 1,Ja 1927+
CU 1+
CtHC 1+
CtY 1+
CtY-D 1+
ICU 1+
IEN 5+
MBMu 13+
MH 1+
NN 1+
NNC 1+
NcD 7-8
NhD 7-8
NjP 1+
OCl 1+
OO 1+

SCHWERTBÜCHER; schriften über ostprobleme und bolschewismus. Berlin; Leipzig. 1-3 1935-37.
CSt-H MH 2-3
CtY MiU 3
DLC NN
IEN 3

SCHWESTER. Berlin. 1-5,1920-22‖
DSG 3-5

SCHWIZER-dütsch. Zurich. 1-87,1882-1928‖?
ICN 1-25,29-87 OCl 1-56
ICU 1-52 PU 1-52
MH 1-52

SCHWURGERICHTE und schöffengerichte Heidelberg. v1-2 no4,1908-10‖?
MH-L 1-2 PU-L 1-2

SCHWYZERLÜT; zytschrift für üsi schwyzerische mundarte. Oberdiessbach. 1,Ja/F 1939+
NNC 1[2]-4

SCIE. Paris. 1-2 (no1-40); Je 23 1872-Mr 23 1873‖?
LU WU

SCIENCA gazeto. (Amerika esperanto-instituto) Madison, Wis. 1,Ja 1932+
Ja-Ap 1932 as Scienca gazeto esperanta
DLC 1+ NN 1+

SCIENCA gazeto. (Internacia scienca asocio esperantista) Paris. 1-3 (no1-26),Ja 1912-F 1914‖?
NN [1-3]
GDC 1-3 NjHoS 1-3
MH no1-14,16-22
NIC [2]3 VRM 1

SCIENCE. Lancaster, Pa.; etc. 1-23, F 9 1883-Mr 23 1894; ns 1, Ja 4 1895+
Supersedes Science, a weekly record of scientific progress. 1883-92 as Science; an illustrated journal; 1895-1910 Science; a weekly journal devoted to the advancement of science. Beginning in 1901 includes official proceedings and most papers of American association for the advancement of science. Absorbed Scientific monthly, Ja 1958

DSG 1+
DSI-M 1+
DWB 1-22; nsv1+
DeU nsv1+
DeWI 1-17,19-20; nsv1+
FDS nsv14,33+
FJ 1-nsv86,88+
FTS nsv15-30,32+
FU 1+
GA nsv1+
GAT nsv1-2,4-5,13+
GDC nsv35-39,44-47, 49+
GDS nsv47-63,73+
GEU nsv4-8,13-[34]+
GMM nsv14-20,83-89
GMiW nsv71+
GOU nsv26+
GU 13+
GU-A nsv1-36,48-53, 56+
H [7+]
I 1-[11]20[21-23]; nsv7+
IC 1+
ICA nsv1+
ICD nsv73+
ICF 1+
ICJ 1+
ICL 4-6,14-17,19-22; nsv5-10[37-59]+

ICMu nsv1-5,47-51, 59+
ICS 1-2
ICU 1+
ICU-R 21+
IEN 1-16,18+
IEN-M 1+
IGK [1+]
IMS nsv51-[58]-[62-78]+
INS [13-22]; nsv1+
IRA 1-[4]-16,21-22; nsv1-[20]+
IU 1+
IU-M 1-10,12; nsv 13+
Ia 1+
IaAS 1+
IaCfT 17+
IaDm nsv1+
IaDmD 1-9; nsv31-71,73-80,82+
IaGG 1-16,18; nsv15+
IaU 1-6; nsv1+
IdU 23+
IdU-S nsv40+
InGD 1+
InI 1+
InLP 1+

MeB 1+
MeHa 21-23; nsv15+
MeP 1+
MeU 1+
Mi 1+
MiD 1+
MiDM nsv11[72]-[79]+
MiDU [3-21; nsv5-41]+
MiEM 1+
MiGr nsv[1-9]+
MiHM 1-[22]; nsv1-[13-22]+
MiKW 1+
MiMiD nsv46+
MiMu nsv[31]+
MiU 1+
MnCS nsv28-80,88+
MnHi 1-21[nsv13,33-74]
MnM 1+
MnMH nsv[18-42] 44+
MnNC 1+
MnRM 1-[13-23]; nsv1-[7-22]-[32]+
MnS 23+
MnSJ 1-nsv5-8,13+
MnSR 15-[17-69]72+
MnSSC nsv[15-31]33-50,69+

MnU 1+

MoK 1-20; nsv6,8-9, 12+
MoRM 6-8; nsv7+
MoS 1+
MoSA 1-[15-21]; nsv[1-13]-47[77-91]
MoSB 1+
MoSU nsv[19-82]
MoSW 1-16; nsv1+
MoU 1-22; nsv1+
MsSM [5-16]; nsv1 [2]-[48]-70,72+
MsU [6-14]16-21,23+
MtBC nsv7+
MtU [22-23]nsv1,3,6-[87-88]+
MtU-M nsv9+
N 1-[23]-nsv[2]+
NAW nsv1+
NB 1+
NBB 1+
NBC 1+
NBG 1+
NBM 1-[10-11]-nsv [1-2]+
NBP 1-20; nsv1+
NBS nsv69-[77]-[79-

OAU 1-12,14-17,22+
OC 1+
OCL 1-18; nsv1-2, 14+
OCU 1-5,10-15; nsv3-8,12+
OCl 1+
OClC nsv[44-47]-[75-81]+
OClW 1+
OClWHi nsv[27-69]
OCo nsv31+
ODW 1-22; nsv1+
ODa 3+
OHi 13+
OMC 1-6[8-19]21-22; nsv1+
OO 1-[7]-[23]+
OOxM 2-9; nsv2+
OT 21-22; nsv19,25+
OU 1-22? nsv1+
OkS nsv5-54,56+
OkT 1-3,13+
OkTU 14+
OkU 1-nsv[1-11]13+
OrCA 1-22; nsv[1-2]+
OrP 1-6; nsv15+
OrPR 17+
OrPU nsv59+
OrU 1-[11]-17,19+
OrU-M nsv1-39,50, 56+
PBL 1+
PBm 1+
PCC nsv29+

PCaD [19-nsv62]
PChW 23+
PBL 1-17,19-20; nsv1-2,5,7-45,47-50
PEr nsv[15-17,59-5o+]
PHC 1-12; nsv1+
PHoJ [3-nsv37]-[52-53]-55,62+
PLF nsv10+
PLeB 1+
PMA 1-16,20-22, nsv3-4,13+

AU [1-9]; nsv[2-6]9+
CLU 1-9,nsv1-6,10+
CaHaD-M nsv61+
CoGrS 1+
CoLH [37-78]+
DCU 1-11,13-14,20-23,nsv5-12[17-19] 21+
GU 1-9,13+
InCW 7-13,19-22,

TxCaW nsv36,38,40, 43+
TxD nsv51+
TxDN nsv61+
TxDsM 1-15,20-21; nsv1+
TxGR 1+
TxH nsv1-5,47+
TxHR 1+
TxLT 1-12; nsv13+
TxU 1-22; nsv2-15, 17+
TxU-M nsv[2]4-[7]8, 11,14+
TxWB 5-6; nsv1-15, 17+
UtA nsv2+
UPB nsv25+
US [1-7]+
UU 1+
V nsv1-10,12[20-33]+
VRP ns [2-10]+
VLR 13+
VLxW 1+
VR nsv60+
VRM nsv20,30,34+
VRT nsv[3,61,70-85]
VU 1-12[19-22], nsv[1-7]+
VW 1-5; nsv24-29, 51+
ViNN 1-nsv61,63+
ViU 1+
WAL 1+
WHB 1+
WM 1+

WMM nsv9-15,26+
WU 1+
Wa nsv[41-44]+
WaS 1+
WaSp 1-22; nsv1+
WaU 1+
WaWW 1+
WvU 9,11-14,17-23; nsv3+
Wv nsv[41-44]-[86-90]+
WyU 1,9-10,22+

MoSW-M nsv19+
MoU 1+
MsU nsv1+
N 1-[20]-nsv[2]-[28]-[58]+
NNQ nsv24+
Nv [1963]-41
OU 1+
PBL 1-17,19-20, nsv1-2,5,7+
PPP [18+]

217

AAT nsv[11-39]41+
ArU 1-4.6-7.9; nsv3+
ArU-M nsv[1-56]+
AzU 1-23; nsv3+
C 1+
CCC 1-3; nsv1+
CL 1+
CLM nsv29+
CLSM nsv73+
CLSU [1-17]; nsv[1-12]+
CLU 1-9; nsv10+
CMC 1-15; nsv1+
CMpS nsv[73]+
CPT 11+
CaL [1-23]nsv[1-25]
CaLP nsv71+
CaM 1+
CaOA nsv31+
CaOG 1+
CaON nsv45+
CaSU nsv[33-36]+
CaT 1+
CaTA nsv[26]-28,33-[34-35]+
CaTR 1-nsv[77]
CaTU 1+
CaV nsv77+
CaVIP nsv81+
CaW nsv37-[41]-48, 55+
CaWU 13+
CoCC 1+
CoD 1+
CoDB nsv31-52
CoDU 1-21; nsv1-2, 4]+
CoTeS [1-22]; 2s v[1-2]+
CoG 1-16; nsv1-36, 39-[50-51]+
CoU 1+
Ct nsv[56]-64[68-72]
CtHC nsv[21-57]
CtHT 1+
CtHW 1-[13-15]; nsv1-5[6-76]
CtNiC nsv11+
CtU 1-3; nsv4+
CtW 1+
CtY 1+
DA nsv1+
DBS 1-17,19-22; nsv1+
DCU nsv5-12[17-85]
DE 1+
DES 1-9; nsv1-[45, 52]-58
DF [1-4]-[9-15,17]+
DGL nsv45+
DGS 1+
DGU nsv59,61,72+
DGW nsv[1-2]-[13-49]55+
DH nsv22-[26-29]+
DHU 12,22+
DLC 1+
DP 1+
CSf 1+
CSfA 1-[15]-[23]-nsv[6-12]+
CSfM 23+
CSjC nsv70+
CSt 1+
CSt-L [1-nsv13]+
CStoC nsv[3,28]+
CU 1+
CU-M 1-nsv[4]+
CU-S 1[2-4]-[17-23]
CaB nsv4+
CaEU nsv31+
CaH nsv43-73
CaK nsv21-22,25+
LN nsv1-3,5-52,79+
LNHT 1-9; nsv[12-16]+
LNS nsv86+
LNX nsv77+
LU 1-16,21; nsv[5-16]+
M 1+
MA 1-18; nsv1+
MAA 1+
MB 1+
MBA 1+
MBAt 1+
MBC [1-11]nsv[2]13+
MBM 1-[23]+
MBN 1+
MBP nsv1-9,65+
MBSi nsv63+
MBU nsv[14-58]
MCM 1+
MChB nsv57-84
MH 1+
MH-BH 1+
MH-BL+ 1-nsv42,44-53,60+
MH-O 1-[10-11,20]+
MH-M 1+
MH-O 1-13; nsv1+
MH-P 1-nsv[2]+
MH-Z 1+
MMeT 15-19; nsv9, 13,15-16,18
MNP 1-18; nsv11+
MNS 1+
MNoW nsv59+
MSM 1-[23]+
MWC 1+
MWoC nsv1+
MWnB 1+
MWtW 1+
MdAN 1-22; nsv7-21, 31-65,89+
MdBE 1+
MdBQ nsv4+
MdBJ 1+
MdBM nsv[27-28]-[89]+
MdBZ 1+
MdHW nsv23+
Me nsv14-15
InU 1+
K 1+
KAS [2,6,11]; nsv[32-74]+
KHi 1-14; nsv[13-22]23,25-28
KMK 1-nsv[59]-[61]-[65]+
KU 1+
KU-M nsv[48-63]+
KyBB 18[20]-nsv[20-32]34-[49]-[54]-[77-87]+
KyBgW nsv67+
KyL [10-nsv50]52-63,65-76,78+
KyLU nsv1-[10-42]62+
KyLU-M 21+
KyRE [1-10]+
KyU 1-14; nsv[4-191+
NNE 1+
NNF nsv13+
NNM 1+
NNN 1-[17-20]-nsv[10]+
NNRI nsv42+
NNU 1-20; nsv1,3+
NNU-H nsv1+
NNU-M [1-nsv48]+
NPV 1-11; nsv3+
NR 1+
NRCR nsv[6-9]70-[77]
NRE nsv41+
NRU 1+
NSU 1+
NSU-F nsv36+
NSU-M nsv[1-37]-[52]-[55]+
NSchU 1+
NSiS nsv33+
NStC 13+
NTR 1-22; nsv1+
NYHT nsv27+
NhOC 19+
NbU 1+
Nc nsv57+
NcD 1+
NcGW nsv14+
NcGuG 13+
NcRS 1-4,6-22; nsv13+
NcU [2-23]+
NdU 1; nsv2+
Nh 1-22; nsv1+
NhD 1+
NhU nsv5+
NjHoS 2,4,13+
NjMD nsv[2-66]+
NjNbN nsv27+
NjP 1-22; nsv1+
NjR 1+
NjT nsv15+
NmScS 1+
NmU 7+
Nv nsv51-60
NvU [18]+
51]+
NBu 1+
NBuB 6-9; nsv[1-39]-43,47-[61]+
NBuG 1-nsv52,54+
NBuU 1+
NCE nsv5+
NCH 1+
NCoS 19+
NHC 1+
NIC 1+
NIC-A 1-[17-20]-[23]+
NN 1+
NNA 1+
NNB 1-[18]+
NNC 1+
NNC-M 19; nsv1+
NNCC nsv[1-33]+
NNCoC 1-22; nsv14+
NNCoo 1-4,9,13+
NNCorM [5-7]15+
PP 1-22; nsv[2-12]+
PPAN 1+
PPAP 1+
PPC 1-[13-nsv12]+
PPD 19-22; nsv1-[26, 28]+
PPF 1+
PPJ nsv[63-65]+
PPPL nsv69+
PPT 1-8; nsv[2]6+
PPWI 16+
PPi 1+
PPiC 1-7; nsv51+
PPiM nsv28+
PPiU 1-7,19; ns[18-26]+
PR nsv67-68,75+
PSC 1-22; nsv1+
PSoU nsv17-35,45-47, 49,57+
PSt 1-13; nsv13+
PU 1-[12-18]+
PVC nsv[70+]
RP 1+
RPB 1+
ScCM [19-30]32-37, 39+
ScCc 3-[10]+
ScCiP nsv[52-83]
ScU 1+
SdB [1-26]; nsv1+
SdRM nsv14-33,36
SdU nsv1+
TC nsv71-[81]
TMG nsv27+
TN nsv21-24,26-[50]-[53-61]+
TNF nsv[31-67]70-80,82-83,87+
TNG nsv23+
TNV 1+
TU 1-15,18[19-20]; nsv7-[31-32]+
TU-M nsv[2-46]-[54-59]+
TxCM nsv[5-8,11]+
nsv5+
InNU nsv32-33,35, 41,43,45-53,55-59, 61-75,77-80,83+
KyBB [1-2,5-7]-[10-11,13-17]-20 [22]-[24]-[26]-[54-57]-[81]-93
LU-M 13+
MBU 14-28,30,34-35,41+
MdBJ nsv1-94,96+
MeLB 1-22; nsv1+
ScCM [1,16-18]19, 22[23]-[25-28]30, 33-[38]+
ScU nsv17-48,50-81,83+
TxCM 2,4,7,23-nsv [9-11]+
TxDN 1-5,nsv21+
VHS nsv39+
VtMM 1+
WMaF nsv73+
WyU 1,3-5,7-9,11-14,17-20,nsv3+

SCIENCE. Tokyo. 1,D 1946+
Japanese title: Rigaku
MCM 1-3 RPB 1+

SCIENCE. (Science society of China). *See* K'o hsüeh

SCIENCE. (U.S.S.R. society for culturnl relations with foreign countries) Moscow. no1,1944+
DSO 1-2

SCIENCE: a weekly record of scientific progress. N.Y. v1-3 no3(no1-82),Jl 3 1880- Mr 4 1882
None issued for Ja 7, 28-F 1882
AAP
CSt-L 1[2-3]
CtY-P [1-3]
DF [1]-[3]
DGS 1-2
DLC
DP
DSG
DWP
IC 1
IEN [1]-[3]
IU
IaAS
InLP 1-2
K 1-2
MBA [1-2]
MBC no[2-13]
MH 1[2-3]
MH-Z 1-2
MWHB no1,20
MoU 1-2
MtU 2
MuNC 1-2
MoU 1-2
N [1-2]
NBM [2]3
NN 1-[3]
NNE [1-3]
NNM 2-3
NNN
NNU 1
NjPrS
OCIW
OkU
PHC
PU [1-3]

SCIENCE abstracts. "(American physical society; etc.) London; N.Y. 1-5,1898-1902. Supersedes Physical society of London. Abstracts of physical papers from foreign sources. 1898-1902 as science abstracts. Physics and electrical engineering. 1903+ in two sections.
AAP
ArU AU
CLU
CPT
CSt
CU
CaTR
CaTU
CoCC
CoDU
CoG
CoU 2-5
CtU
CtW
CtY
DA
DBS
DLS
CaD
CaK
CaM
CaMD [1]
CaON
CaSU
N
NAW
NBP
NBu
NBuG
NHC
NIC NNN
NN
NNC
NNCC 1-3
NNCoC
NNCoo 3-5

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